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CONTRIBUTORS TO VOLUME LXXXI.

Albert S. Ashmead, M.D., New York.
Dr. Baradat, Cannes, France.
Simon Baruch, M.D., New York.
Cheves Bevill, M.D., Winfield, Ark.
G. M. Boyd, M.D., Philadelphia, Pa.
C. W. Canans, B.S., M.D., Orkney Springs, Va.
J. J. Connor, M.D., Pana, Ill.
Lawrence F. Flick, M.D., Philadelphia, Pa.
J. P. Crozier Griffith, M.D., Philadelphia, Pa.
A. Habermaas, M.D., St. Louis.
Wm. Henry, M.D., Harmon, Ill.
A. S. MacDonnell, M.D., Rat Portage, Ontario, Canada.
Isaac Mayhugh, M.D., Indianapolis, Ind.
Emil Meyer, M.D., New York.
L. Midy, Paris, France.
C. C. Morris, M.D., St. Louis.
John H. Musser, M.D., Philadelphia, Pa.
Emma E. Musson, M.D., Philadelphia, Pa.
Charles P. Noble, M.D., Philadelphia, Pa.
A. H. Ohmann-Dumesnil, A.M., M.D., St. Louis.
Charles J. Pollard, M.D., Princeton, Ky.
Boardman Reed, M.D., Philadelphia, Pa.
Albert E. Roussel, M.D., Philadelphia, Pa.
Wm. H. Seaman, M.D., Washington, D.C.
J. W. P. Smithwick, M.D., Lagrange, N. C.
J. Dutton Steele, M.D., Philadelphia, Pa.
Eugene C. Underwood, M.D., Louisville, Ky.
Samuel Wolfe, A.M., M.D., Philadelphia, Pa.

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ORIGINAL COMMUNICATIONS.

SYNOPSIS OF DR. J. ASHBURTON THOMPSON'S REPORT OF PLAGUE IN NEW SOUTH WALES.

BY ALBERT S. ASHMEAD, M.D., NEW YORK CITY.

According to Dr. J. Ashburton Thompson's (Chief Medical Officer of the Government and President of the Board of Health, New South Wales) Report on the Outbreak of Plague at Sydney, 1900, a copy of which voluminous report was kindly sent to me by Dr. Thompson, there were attacked with plague, between January 19 and August 9, 1900, 303 persons, of whom 103 died.

Haffkine's prophylactic was used on 10,700 people, and no illness occurred in these, excepting 13, who all recovered after very mild attacks or types of the disease.

The Yersin-Roux serum was used as treatment of the disease in 71 cases, of whom 17 died. The opinion provisionally formed as to the efficacy of the serum was, that it had real antitoxic powers, which are manifested in useful recovery of the circulation from the depression which is a constant feature of the natural disease, but that in its present state it can hardly be relied upon as a very curative agent. Its employment did not interfere with the natural course of the epidemic.

As to the origin and mode of spread: Beyond pointing out the several foreign ports from which the plague might have been introduced into Sydney (it had come to Adelaide, South Austra-

lia, January 15, 1900), he says that between Sydney and the infected English ports of Hong Kong and Calcutta there were two lines of steam vessels making monthly voyages. But no vessel had come to Sydney with a case of human plague aboard since 1894, and it resulted in no outbreak.

During the present epidemic the first patient was a car man employed by the Central Wharf Company between October 21, 1899, and January 20, 1900, and four vessels which had touched at infected Hong Kong lay at Central Wharf, one of them from January 9 to January 20. This man had a circular spot (retromalleolar) which suggested that the inoculation had been effected there at a part of the foot which was well covered by the boot the patient wore. by *an insect—namely, by a flea.* The inference drawn was that rats were already dead or dying of plague in Sydney, and that such rats had been landed at Sydney, but from what place or when could not be told.

Advertisement was inserted in the papers to ascertain if rat epizootic preceded the outbreak in man, as it was reported that rats were dying at Noumea. No information concerning mortality among rats was furnished in response to the advertisement until February 14, when an officer in the Customs Department drew attention, through the Collector, to unusual frequent deaths among the rats at Huddart, Parker & Company's wharf, on the east side of Darling Harbor (the first man stricken with the plague had visited this wharf ten days before he was attacked). Four live rats and three carcasses were brought to the laboratories. These seven rats were at once utilized for the usual bacteriological inoculative tests, and were shown conclusively to have been suffering from plague. And the glands from the body of the man who had already died were brought to the laboratory, and on examination showed with certainty that the cause of death had been plague. The second man to be attacked worked two hundred yards from the same wharf. The third case also lived on the west side of the wharf. The fourth case received his supplies from that wharf, and so forth; thus the epidemic spread. Direct infection from the sick to the well could have occurred but rarely, as it took *276* households to furnish *289* cases, and the ten Chinamen who were attacked occupied ten different dwellings. Among the cases were some persons who, after receiving the infection at Sydney, traveled to more or less remote towns and there fell ill,

from none of whom was there any extension of the disease. Four hundred and fifty-eight persons were exposed to risk of infection from 77 cases during the first two or three days of illness, and but one was attacked after separation from them, and from the houses at which they lay ill; 240 persons were exposed to 31 patients during the first five or six days of illness, and none of them fell ill. Plague, as seen at Sydney during the whole outbreak, *was not "catching."* However, plague can be communicated from the sick to the healthy. Thus primary plague pneumonia is very easily communicated to others, while several of the secretions, excretions and tissues of the diseased body carry the bacilli which is the cause of the disease. Inoculation of these products can be effected in two ways: a wound having been made first, and the diseased matter may have been subsequently brought in contact with it; or the wound may have been made with an instrument already carrying infective matters, and this is likely to be witnessed in cases of post-mortem examinations of the bodies of persons or animals who have died of plague; but probably it happens much more frequently than is generally supposed when a suctorial insect first punctures the skin of a person suffering from plague and soon afterwards punctures the skin of a healthy person. The septicemic or blood-poisoning case could alone give up the bacillus to these insects, and this form furnishes the minority of the cases. On the other hand, *it is the commonest form of the disease in rats.* And thus the insects could acquire the pest baccilli, with which they might inoculate man, but they would rarely acquire them by sucking the blood of man himself. An examination of 276 cases showed that the infection attached to neighborhoods, usually in houses, and that it fell erratically on houses in an infected district. The communication to man was also erratic. The only situation in which it was found (out of connection with the bodies of the sick) was in the bodies of sick and of dead rats. It did not exist effectively in soil, water, food or fomites. Hence the known presence of the infection in rats points to these animals as the source from which man derived the disease. How the rats became infected is doubtless a question in relation to which it is possible infectivity of soil is of importance. The merely practical consideration how the infection could probably be transferred from merchandise of infected ships to soil under the usual conditions of

packing, handling and warehousing, need only be mentioned. It is manifestly most likely that the infection, if communicated by rats, was so communicated by such rats landed from a ship; but then why should the soil stage be imagined? Plague spreads from rat to rat in part at all events, and with certainty by the healthy feeding on the bodies of the dead. This is the way in which Loeffler's mouse-typhoid and the disease of rats caused by Danysz's organism are spread, and in those cases is perhaps the only way, both being diseases caused by organisms which belong to the same group as bacillus pests. In short, the introduction of such rats would seem to be an adequate and highly probable cause of the direct infection of local rats, while suggestion of the soil as a link seems unnecessary, and besides almost entirely lacks the requisite basis in observed facts.

Admitting, then, that the source of infection for the local rats cannot be demonstrated to have been infected foreign rats, but asserting on etiological and general grounds that the origin is almost infinitely probable, it must be inquired whether the observed distribution of plague rats in Sydney was sufficiently wide to account for the epidemic. It has been assumed that man was usually in this outbreak infected by rats. Whether it actually were so or not, was it possible?

Rats diseased and dead were discovered in the infected districts; also an infected cat; two house mice also had plague. Of 167 rats examined, of which 50 were alive, 10 were sick, and one-fourth of these sick rats had plague. Of the 117 dead rats examined (many of them putrid), 19 were shown to have had plague, and very many rats were examined which there was no reason to doubt had also died of plague. Rats thus suffered of an epizootic, and this epizootic, which began before plague in man had occurred, and ceased about the same time as the human epidemic, and the disease in the rats was plague. In short, that the infection was disseminated by rats appears tolerably certain; and it may not be too much to surmise that plague is primarily a disease of the rat, which is communicable to other animals, among which man happens to be included.

A rat may well disseminate the infection by sneezing, since it is the mucous membrane of rats; but this would produce, found on the primary pneumonic form in man, not a common form in any epidemic. A rat might also disseminate it with its excreta; and

thence by contamination of food or of articles other than food. As to food, man rarely if ever gets the disease by ingestion. Few articles thus infected are capable of inflicting a wound or enter into circumstances which would afford the necessary opportunity; but there is certainly one exception. If hay is become the medium for deposited infection, any person handling it would be very likely to receive the slight wound which alone is necessary to inoculate; and hence is just as likely to carry the infection as rats themselves, dead or alive.

The means of inoculation must be one commonly in operation to be an efficient cause of epidemics.

In barefooted population of the East the observed preponderance of bubonic enlargement of the glands of the groin would indicate entry of the infection at some part of the lower extremity. A wound therefore of the foot must be the cause. Among the 303 cases there were 17 without bubo; the remaining 286 cases had a right inguinal femoral in 99 cases, the left in 101 cases, and it was bilateral in 9; in all there were 209 in which bubo occurred in the inguinal-femoral region, *and nowhere else;* or 73 per cent. of all those which showed bubo at all. Yet the inhabitants of Sydney no more go barefoot than do the inhabitants of London.

The observations of Dr. P. L. G. Simond disclose the manner in which inoculation can be brought about. He considers that plague is most often communicated to man by fleas, which after feeding upon plague rats become transferred to man, whom they inoculate. The disease thus is also conveyed from rat to rat, and to other susceptible animals. The minute puncture usually leaves no mark, but in a small proportion of cases a phlyctenule or a bleb. Such a lesion was observed in seven of our cases. A thorough and quite systematic search could not be carried out for this wound. Several fleas taken from infected rats were examined; in one bacillis pestis was demonstrated, and it was identified by the result of inoculation into a guinea-pig.

Nine fleas taken from rats were classified by Mr. Walter W. Froggart, Government entomologist:

1. Pulex Serraticeps (common cat and dog flea). The dog flea is the common house flea in the United States. As Mr. L. C. Howard, United States Entomologist, says in his Bulletin 4: "What is supposed to be the human flea in the United States is

the common cosmopolitan flea of the dog and cat. Pulex Serraticeps is said by Newmann not to bite man, but this is not in accord with experience in the United States."

2. Pulex Fasciatus, the common rat flea. Whether Pulex Fasciatus will bite man is not known in Sydney. No experiments were made, yet, as Dr. Tidswell says, they may bite *once* when they find themselves on the human body.

Pulex Serraticeps, which certainly bites man, was found on two of the small number of rats thus examined. The teachings of this epidemic of plague as it appeared at Sydney seem to be according to Dr. Thompson as follows:

1. The disease was not directly communicated from the sick to the well—in other words was not "catching."

2. It was not communicated in any important degree, at all events, from the sick to the well by mediate channels (clothes, household goods, merchandise, excreta).

3. The infection attached to localities and spread to others adjoining and continuous with that in which it was first manifested.

4. It also spread in a fashion which betokens the possibility of its being transported mechanically from an existent focus to a considerable distance (Moore Park garbage tip, and Manly), and there initiating an independent focus.

5. In the buildings on any infected locality cases occurred irregularly, and showed no special proneness to occur in adjoining houses.

6. When the occurrence of one case among the inhabitants of a building showed that the infection was present in it secondary cases rarely followed. Irregularity of incidence on houses was accompanied with irregularity of incidence in the inmates.

7. An epizootic disease among rats preceded the first case which occurred in man.

8. This epizootic disease was plague.

9. The area over which the epizootic extended was practically co-extensive with that on which cases of plague in man were observed.

10. The epizootic died out, as far as can be learned, at the same time as the epidemic ceased

11. The epidemic was caused by communication of the infection from rats to man.

A CASE OF MYXEDEMA.

BY DR. CHEVES BEVILL, WINFIELD, ARK.

In 1886 87 I had a case which must have been myxedema. Fernal, æt. 13 when I first saw her, 1886, latter part of May. She is of a very nervous family. Her mother suffered a great deal from neuralgia of one and another form. This child had an attack of remittent fever which lasted about two weeks. This was in January, 1885. After recovery she gained rapidly in weight; lost her customary activity; preferred to remain in the house.

FIG. 1.

FIG. 2.

In January, 1886, she was down with another attack of fever for three weeks. After recovering from the fever she could not walk for some time. When I saw her first, May, 1886, she was carried on a reclining chair. She would rarely open her eyes; talked but little. Temperature normal, pulse 136, respiration 28. Face large and round, and rough from what seemed to be acne of a dry form. Weight 84 pounds.

The gait was very unsteady, walking with the feet wide apart. Very tender over the bowels, also all along the spine; bowels constipated; urine sp. 1020, acid. I prescribed mild purgatives, bromids and valerian for her nervous condition, as she could not sleep at night.

I saw her no more until October of 1886. It was with great difficulty that she could be moved. Sat in her chair all the time, moaning most all the while. She had lost some in weight. Her body was covered with an excessive growth of hair; mons well covered with same; breast enlarged; skin rather blue. Had never menstruated.

Figure 1 will give an idea of how she looked when I saw her in October. I had an artist to take a tin type of her. Her hands were large; her feet unusually so for a child of her age.

Well, as she could not sleep and was continually moaning, I gave morphine or opium to make rest. Gave iodine and arsenic all that she would bear. Kept her on this line of treatment (with some changes at times) for eighteen months. She had got so she could go about the house, and wanted to visit most of the time. She had got in the opium habit; I now used quinine and a little morphine until she got over that. She shed the surplus of hair from her trunk; skin cured, menses came out, hands and feet became normal. I now had the same man to take a picture of her (Fig. 2). This was over two years after beginning the last treatment.

She is a very small woman; weight somewhere in ninety now. I give this case as such is not noticed in the country very often. According to Hammond, Sir William Gull was the first to mention myxedema. See Diseases of Nervous System, by W. A. Hammond, M.D. I have consulted other works: Hare's Diagnosis, Wood & Fitz's Practice, Gould & Pyle's Cycle of Medicine and Surgery, Quain's Dictionary of Medicine, Holt, etc.

Medical Association of Missouri.—At the annual meeting of this Association in Jefferson City the following officers were elected for 1902: Dr. J. D. Griffith, Kansas City, president; Dr. R. E. Young, Jefferson City, first vice-president; Dr. J. C. Whaley, Osceola, second vice-president; Dr. R. M. Funkhouser, St. Louis, third vice-president; Dr. J. F. Campbell, Calloa, fourth vice-president; Dr. G. W. Vineyard, Jackson, fifth vice-president; Dr. B. C. Hyde, Kansas City, recording secretary; Dr. F. W. Burke, Sedalia, assistant recording secretary; Dr. Chas. Wood Fassett, St. Joseph, corresponding secretary; Dr. J. Franklin Welsh, Salisbury, treasurer. St. Joseph was unanimously chosen as next place of meeting.

CLINICAL EXPERIENCE WITH ADRENALIN.*

BY EMIL MAYER, M.D.,
Surgeon New York Eye and Ear Infirmary, Throat Department; Fellow American Laryngological Association, and of the New York Academy of Medicine, New York.

The aqueous extract of suprarenal gland is perhaps the best culture medium known. Its instability, the involved method of preparation, its unsightliness and the inexactitude of its various strengths tend to make us welcome a preparation that is exact, stable and, above all, clean. Dr. Jockichi Takamine undertook the task of isolating the active principle of the suprarenal gland. He obtained a substance in stable and pure crystalline form which raises the blood pressure, and which he named "adrenalin."

The author has used solutions of adrenalin chloride, 1 to 1,000, 1 to 5,000 and 1 to 10,000; his cases were all rhinological. Blanching of tissues followed the application of the strongest of these solutions in a few seconds, and was very thorough. In no instance was there any constitutional disturbance. He has employed no suprarenal extract since for any purpose whatever.

The effect of the solutions was not altered by their change to a pink color; they were used for six weeks. Subsequently a small amount of chloretone was added to the fresh solutions, and now there is but slight change of color and no floccules appear.

Thirty-five cases are reported in the tabulated form, showing that the usual effect of the aqueous extract of the suprarenal gland was obtained. A few operative cases bled freely, but in every instance the hemorrhage was promptly checked by a second application of adrenalin. The adrenalin was used not only as a hemostatic, but for the relief of nasal congestion, as a diagnostic aid, and for the continuous treatment of acute inflammatory affections of the accessory sinuses.

The author arrives at the following conclusions:

1. Adrenalin solutions supply every indication for which the aqueous extract has been used.
2. They are sterile.
3. They keep indefinitely.
4. Solutions, 1:1,000 are stong enough for operative work; and 1:5,000 and 1:10,000 for local medication.
5. They may be used with safety.

*Abstract from original paper in the *Philadelphia Medical Journal*, April 27, 1901.

In this connection, it is interesting to note that E. Fletcher Ingalls, M.D., of Chicago, also has had a very satisfactory experience with adrenalin. In a paper entitled "Notes on Adrenalin and Adrenalin Chloride,"* he reports that he experimented with solutions, varying from 1 to 1,000 to 1 to 10,000, of the chloride of adrenalin in distilled water or normal salt solution, and kept careful records until satisfied of its activity. In nine cases a very small quantity of a spray of one part of chloride of adrenalin to 10,000 parts of water was applied to the nasal cavities, with the effect of blanching the mucous membrane quickly and in most cases causing contraction of the swollen tissues similar to that caused by cocaine. The first solution used was made with distilled water, and caused smarting; normal salt solution was then used as the solvent, with perfect satisfaction. The smarting may have been due to the presence of a small quantity of formalin, in which the atomizer had been washed just before use.

Experiments were also made with insufflations of a dry powder consisting of 1.5 per cent. (75 parts) each of biborate of sodium and bicarbonate of sodium; 3 per cent. (150 parts) light carbonate of magnesium; 1 part of adrenalin to 5,000 parts sugar of milk. This powder cleared the nasal cavities when obstructed by swelling of the turbinated bodies, and diminished the secretion decidedly. A case of daily epistaxis was relieved by sprays of a 1 to 10,000 solution. Another of conjunctival congestion from overwork was entirely relieved by the installation of a similar solution. The author has had equally satisfactory results in cases of conjunctivitis; laryngitis, acute and chronic; acute laryngitis with edema glottidis; acute coryza; chronic laryngo-tracheitis with acute exacerbation; and in preparation for operations upon the nose.

In conclusion, the following results are presented: This remedy will be of great value in the treatment of acute inflammatory affections of the nasal cavities, either in the sprays of 1 to 5,000, or in powders of 1 to 5,000 or 1 to 2,500 sugar of milk. In acute coryza and in hay fever, in epistaxis from various causes, in acute inflammation of the fauces, solutions of 1 to 1,000 will have good effects. In acute or subacute laryngitis solutions of 1 to 1,000, applied with moderate force, will give very great re-

*_Journal of the American Medical Association_, April 27, 1901.

lief; it appears probable that vocalists may obtain sufficient relief from congested cords, for at least two or three hours, to obtain normal efficiency in the use of the voice.

In a paper read before the Chicago Laryngological and Climatological Association, W. E. Casselberry, M.D., called attention to the fact that adrenalin chloride solution is clear, colorless, odorless, sterile and stable if protected from heat, light and oxidation; it is non-irritating to mucous membranes. When applied locally it exerts identically the same vaso-constrictor influence as the aqueous adrenal extract. Sprayed into the nostrils in the strength of 1 to 10,000 it produces a visible change from turgidity to compactness of the turbinated tissues and a decided pallor of the mucous surfaces. In the strength of 1 to 1,000, or even of 1 to 5,000, it has the power to limit hemorrhage during operations, and is an aid to the treatment of epistaxis. It may be substituted for cocaine in all cases in which an ischemic effect is desired, *e. g.*, to facilitate inspection of the deeper recesses of the nasal cavities and to make them more accessible. Adrenalin has little or no cerebral stimulant effect, exciting no desire for more of the drug; hence there is little risk of habit-formation.

The author expresses the opinion that adrenalin should afford relief in asthma associated with bronchitis and vaso-motor paralysis, although he would expect little benefit from its use in asthma characterized by bronchial spasm. It may be formed into an ointment with vaseline, or mixed with stearate of zinc, powdered starch or sugar of milk to make powders for nasal or laryngeal insufflation. The bibliography is very comprehensive, covering the literature of the subject down to the present date.

Roentgen Society of the United States. — The second regular session of the Roentgen Society of the United States will take place in Buffalo, N. Y., September 10-11, 1901, at the University of Buffalo.

The program for the meeting must go to press August 20th, and a manuscript copy of all papers to be read at the meeting must be in the Secretary's hand on that date in order to arrange the order of proceeding. No paper not forwarded before going to press can be entered in the program or read at the meeting.

Please send in the title of your paper not later than August 20th to Dr. J. Rudis-Jicinsky, Cedar Rapids, Iowa.

THE TREATMENT OF NASAL CATARRH BY THE GENERAL PRACTITIONER.

BY EUGENE C. UNDERWOOD, M.D.,
Surgeon B. & O. S. W. R. R.; Surgeon K. & I. B. Co., etc., Louisville, Ky.

I have long entertained the view that the general medical practitioner neglects to treat his patients for catarrh and sends them to a specialist when he could successfully manage these himself. In fact the treatment of catarrh is very simple, and the results which follow correct and systematic treatment are very satisfactory. In practice two forms of chronic nasal catarrh are met. These are hypertrophic rhinitis and atrophic rhinitis.

The hypertrophic form is more generally seen, and is characterized by a thick mucous discharge from the nose, great liability to colds, obstruction of one or both nostrils which forces the patient to breathe through his mouth, nasal intonation of the voice, There is more or less headache and the sense of smell is lost or impaired. There is dryness of the throat, deafness and other symptoms showing the extension of the disease to neighboring organs. Exostosis of the osseous structures often is seen.

Atrophic rhinitis (ozena) is characterized by a sense of dryness in the nose and throat, a thick purulent discharge and the expulsion of discolored crusts and an offensive putrid odor. The sense of smell is impaired and the patient is weak and anemic.

The mucous membrane is dry and glazed, but in advanced cases ulceration and necrosis are present.

The treatment consists of applications directly to the diseased area and the administration of such internal remedies as will correct any coexisting disease or morbid state. In some cases where there is occlusion by exostosis the resources of surgery must be invoked.

Let me examine more in detail the treatment of the types of nasal catarrh.

In simple chronic hypertrophic rhinitis the results of treatment will be most flattering. In a case attended with no constitutional disease nothing is necessary beyond having the patient spray the nasal mucous surface with a solution composed of equal parts of water and hydrozone every three hours.

If the case has persisted some time and the patient has an amount of mucous discharge I have him take twenty drops of balsam of copaiba four times daily. The hydrozone is not only

a disinfectant and germicide, but its curative action on the inflamed mucous membranes is speedy and is not equaled by any other drug I have ever used. When the patient is anemic I have him to take iron, and any other drug is used when it is called for by any associated disease or morbid condition, but the hydrozone spray is used in all cases.

In the atrophic variety we shall have to use the same local application. The hydrozone at once overcomes the offensive odor and takes off the purulent crusts.

These cases must be treated with cod liver oil, iron and such other remedies as will bring up the general health.

Here are a few clinical histories:

Mr. R. H. M., age 60, had been a sufferer for two years. There was no exostosis, but when he had a cold he could breathe only through his mouth. He was in good general health, so I had him to buy an atomizer and use a spray composed of equal parts of distilled water and hydrozone. He sprayed the mucous surface of the nose every three hours. On this he made rapid improvement and in three weeks had no further symptoms.

S. M. T., age 18, had chronic hypertrophic nasal catarrh in which the mucous discharge was very abundant, and this was associated with dryness of the throat and constant desire to hawk and spit. She used the hydrozone and water spray, and took fifteen drops of balsam copaiba three times daily. I had the pleasure of seeing this young woman go along to complete recovery in a period of six weeks.

Mrs. R. J. C., age 49. This lady had atrophic rhinitis, and as soon as she came near you the putrid odor asserted itself. Her general health was lowered. I had her use the hydrozone and water spray and take cod liver oil internally. She spent last winter in Cuba, and has just gotten home greatly improved in general health and her catarrhal disease is better.

She says the spray effectually destroys the disgusting odor and that scarcely any discharge now appears.

I expect to see this patient entirely well in several months.

THE TREATMENT OF DIPHTHERIA OTHER THAN WITH ANTITOXIN.*

BY J. P. CROZIER GRIFFITH, M.D., PHILADELPHIA, PA.

With the advance in the use of antitoxin for diphtheria the discussion of other methods of treatment receives constantly less attention in our text-books and journals. In fact, much of the advocacy of the use of drugs has become really only ancient history, and any attempt in this connection at a review of it all would be not only wearisome, but useless. In the present state of our knowledge, however, we would err greatly in putting sole dependence on any one line of treatment, valuable though this might be; and we may well consider some of the methods, hygienic and medicinal, upon which we can most depend as an aid to the action of diphtheria antitoxin.

A. *Prophylaxis.* —Since the disease is an exceedingly contagious one, and one whose germs have a remarkable vitality, every effort must be made to prevent the spread from the sick to the well. Thorough isolation of those affected is, of course, important, as is the careful disinfection of everything which has been in proximity with the patient. Not only so, but individuals in any way concerned in the nursing of patients with diphtheria must come as little as possible in contact with others, since, without having the disease themselves, they may readily convey it. Children of the family should be taken from the house whenever possible, and, further, themselves quarantined for a time—ten to fourteen days —lest they carry it to others. It is a matter of repeated observation that the germs of the disease can often be found in the throat of a healthy nurse caring for a case of diphtheria. The nurse in attendance should wear, of course, wash dresses, and a cap which thoroughly covers the hair. On leaving the room for her necessary outings she must change her dress and disinfect her hands and face. The physician must never forget that he can himself readily become a source of danger to his other patients. Before he enters the sick room he should cover his clothing with a garment of rubber or linen, and it is much better, too, if he put on his head some such article as the oil-silk cap worn by women bathers at the seashore. On leaving, he should wash his hands and face with a disinfectant, such as a solution of carbolic acid or lysol.

*Read before the Philadelphia County Medical Society, April 24, 1901.

As in all infectious diseases, the room should be carefully selected in the upper part of the house, if possible opening into another room; best a bath room. The windows of this ante-room should be kept open as much of the time as possible. All ingress to the sick room should be through the ante-room, and the other door of the sick room leading into the entry should be locked, and the cracks stuffed with cotton or closed in some similar manner. It is commonly advised to hang a sheet moistened with a disinfecting fluid, such as carbolic acid or corrosive sublimate, at the door leading from the entry into the ante-room. It is questionable whether this is of real service, yet, as it may be so, it is well to have the practice enforced. All upholstered furniture, curtains, books, toys, etc., should be removed, and the carpet taken up and replaced by old rugs or strips of carpeting, which may be destroyed later. Pieces of old linen cloth should be used in place of handkerchiefs, and must be burned immediately. All the bed linen and personal linen of the patient should be soaked in a disinfectant solution in the ante-room before it is removed for washing. All excreta should be disinfceted in a sublimate solution. The meals of the nurse should be carried to the door of the anteroom and there taken in by her. After using, the plates, forks, and so on should be washed in a disinfectant, preferably carbolic acid, as bichloride will, of course, injure metal.

When the disease is over the room should be washed with a disinfectant and then fumigated with formalin. Although this substance has but limited penetrating power, it is at least serviceable to a certain extent. Finally, the mattresses and pillows should be steamed, if this is possible, and the room repapered and painted.

For their own safety, the most careful supervision must be kept over both the throats and the noses of all members of the family, since the development often occurs of attacks so light that they would otherwise be overlooked. It is such cases which are especially liable to spread the disease abroad. Then, to prevent members of the household unavoidably exposed from contracting the affection, the systematic, frequent use of antiseptic gargles is to be recommended. For such purposes diluted solutions of corrosive sublimate, 1 to 10,000, weak carbolic acid solutions, diluted chlorine water, etc., are to be recommended; and for the nose alkaline antiseptic sprays.

After the disease is over the patient must still be isolated for at least three weeks from the beginning of the attack. A still better method, where cultures can be taken, is to continue isolation until the Klebs-Löffler bacilli can no longer be found in the throat.

B. *Treatment of the Attack.*—The treatment of the attack itself may be divided into: 1. Hygienic and dietetic. 2. Local. 3. General and constitutional.

1. *Hygienic.*—Measures of this character do not differ materially from those to be employed in other infectious diseases. The room must be kept at an even temperature of about 70°, draughts avoided, yet ventilation carefully attended to. The last is best obtained by means of a fireplace or by ventilating through the windows of the ante-room. The bedclothing and the linen of the patient should be changed frequently, as this often adds greatly to the sense of comfort. Daily ablution can be carried out in nearly all cases, with proper precautions against chilling and fatigue. Care must always be taken to avoid sudden movement of the body, either voluntary or made by the nurse, on account of the well-known weakness of the heart which attends the disease. This holds good even after convalescence has begun. In fact, even the mildest case should be confined to bed in a recumbent position throughout the attack.

In cases giving rise to offensive exhalations, the use of deodorants in the room is of advantage, such as the burning of aromatic pastilles, the employment of benzoin sprays, and the like. But it is also to be remembered that the use of such measures, or of many so-called "disinfectants," in the room, is valueless so far as the destruction of germs is concerned. The standing about of dishes containing chloride of lime or of soda, for instance, does no good whatever.

The diet of a patient with diphtheria should be liquid, and later semi-liquid, and always of a most nutritious nature. This is to spare both the stomach and in many cases the kidneys, involved, as they so often are, by inflammatory conditions. The patient should be fed as far as possible at regular intervals, and with definite amounts. Where the condition of the pharynx makes swallowing almost impossible, rectal alimentation must be resorted to. In this event some concentrated peptonized beef preparation is very serviceable.

2. *Local.*—Much good is to be expected from this form of treatment, but a careful selection of measures must be made. The number of procedures advised is very large. We can consider only a few.

(*a*) *Nasal Diphtheria.*—Remembering that in many cases of diphtheria the disease begins in, or is even confined to, the nose, care should be taken in every case that this region receives treatment. The solutions may be applied by means of an atomizer, but for thoroughness the use of a syringe is to be preferred. To use a syringe, the patient should be recumbent, with the head well turned to one side. The fluid should be injected into the upper nostril, returning through the other nostril or through the mouth. The head is then turned to the other side, and the second nostril treated in a similar manner. All solutions should be tepid. Spraying the nose is apparently a less disagreeable form of treatment, and yet often the resistance of a child makes it just as productive of exhaustion. In fact, the advisability of using either form of treatment must be determined for each individual case. When the procedure is well borne, the frequency of its repetition depends entirely upon the degree of involvement of the nose and nasopharynx. Even when there is apparently no nasal involvement whatever, treatment of the nose is still advisable.

The solutions to be employed should be those which check bacterial growth or act as cleansers only, rather than those distinctly bactericidal. These latter are too powerful to be well borne. In many cases mild alkaline antiseptic sprays or douches are sufficient. Solutions of boric acid are also serviceable, as are those of borax. Trypsin has been highly recommended. It may be employed in a solution of ℥j to ℥j, in alkaline water. Papoid has also won considerable reputation, best in combination with bicarbonate of soda in solution. Bichloride of mercury in the strength of 1 to 5,000 is sometimes employed. Peroxide of hydrogen is very efficacious. Care should be taken however, first, that it is active; second, that it is not acid; and, third, that it is sufficiently diluted. A brand which is but little acid should be chosen, and any excess neutralized just before use by the addition of a little bicarbonate of soda or lime-water. The dilution for use in the nose should be at least 1 in 4.

(*b*) *Pharyngeal Diphtheria.*—Various solutions may be applied to the pharynx by the syringe or on a swab or brush. As with

local treatment of the nose, the question of using an application must be determined by the degree of resistance offered by the patient, and the resulting exhaustion. In the septic cases applications are greatly to be desired, yet, in some, prostration is too great to allow of it. In others, the degree of prostration prevents any forcible resistance, and applications may well be made. Every case is a rule to itself, but the main rule is "*non nocere.*"

For diphtheria in the pharynx, we may well use cleansing applications followed by those having bactericidal power. A method to which I am partial is the application of a solution of peroxide of hydrogen in full strength or slightly diluted, taking the precautions already mentioned. Immediately following this, Löffler solution is applied on a swab and held upon the affected parts for a few seconds. This solution as often prepared by druggists consists of a combination of menthol, toluolene, creolin, solution of ferric chloride, and alcohol. The application is painful and must not be repeated too often. Another very serviceable antiseptic application is a mixture of tincture of chloride of iron, glycerin, and water, in various proportions. Still other favorites, and deservedly so, are a solution of bichloride of mercury 1 to 1000, a solution of carbolic acid 3 per cent. to 5 per cent., chlorinated soda, and chlorine water.

The application of powdered substances by insufflation is used by many physicians. For this purpose are recommended papoid, trypsin, sulphur, and so on.

(*c*) *Laryngeal Diphtheria.*—In enlargement of the larynx local treatment must be largely by inhalation. Most useful in this connection is the employment of steam, or, more properly, water vapor, since precaution must be taken that the actual steam does not approach too closely to the patient lest burns result. It is also important in using this plan of treatment, that *enough* vapor be generated. A gentle simmering of a small pan of water in a large room is of no value whatever. Either the room must be kept full of vapor by plunging red hot iron, hot bricks and the like, into tubs of shallow water, or the child must be surrounded by a croup tent and the air within it kept moist by a steam atomizer or a croup kettle. Home-made croup tents can readily be constructed by tying a broomstick upright at each corner of the crib, connecting the tops by cord, and throwing blankets over the framework thus made. A small A-shaped

opening is left near the head, and the vapor conducted in through this. It is often advised to medicate the vapor with benzoin, eucalyptus, turpentine, carbolic acid, and the like. It has always seemed to me questionable whether there was any real advantage in this procedure.

3. *General and Constitutional Treatment.*—It is certain that there is no drug which can be called a specific for diphtheria. At the same time, the thought sometimes arises that in our interest in the specific treatment of the disease with antitoxin, we may perhaps be neglecting testimony on which we formerly relied, and which was based on very extensive clinical experience, viz.: that help was to be had in many cases from the administration of medicine internally. At any rate, we can not omit in this connection referring to two remedies once popular—mercury and iron.

Mercury absorbed into the blood was supposed to act as a solvent upon diphtheritic membrane and at the same time to diminish the virulence of the disease. In the form of the bichloride it has been very extensively employed. It was given in large doses, one-sixtieth to one-thirtieth of a grain, every two hours, for a child aged two to four years. I formerly used it extensively, and do not remember ever to have seen any bad symptoms produced by it. This was the general experience with rare exceptions. Many physicians were thoroughly convinced that it was of great benefit. Whether this was or was not an error it is impossible to say.

The same is true of the administration of calomel, the use of which was older and even more extended. It was given in fractional doses of a grain, or even in larger amounts, every two hours, the laxative action being guarded against. Another very popular method, especially in laryngeal cases, was the administration of calomel by fumigation, fifteen or more grains being volatilized on a hot iron and conducted into the croup tent, where the child could inhale it.

Iron, especially in the form of the tincture of the chloride, was long a most popular remedy, and great reliance was placed on it by many physicians of experience and ability. It was supposed to check the rapid destruction of the red blood-corpuscles. It was given in large doses, frequently repeated. It is possible that both mercury and iron in large does are not without some

power in the treatment of diphtheria. Although, as stated, so many physicians believe in their power, we can not tell their real value in the absence of large statistics.

Undoubtedly of service and of great importance in diphtheria, is the employment of a powerful supporting treatment. First in rank comes the use of alcohol. The depression accompanying the disease is enormous, and large doses of alcohol are frequently needed, and are well borne. I do not know of any other disease of which this is more true. In severe cases it must be given boldly, and, further, its use must be commenced early and the amount increased rapidly if depression is seen to be growing. Of course, as with all drugs, its effect must be watched. Strychnine is also borne in this disease with remarkable tolerance, especially by children, and in full doses has often, I am convinced, been the means of saving life. It is particularly useful where there is an increasing lack of tone of the pulse, or other reason to dread cardiac failure. Digitalis and other heart tonics are needed frequently and are of service.

High temperature must often be reduced, but there is nothing here characteristic of diphtheria which demands special remark, except a caution against any possibly depressing measures. Other symptoms, as well as the various complications and sequels, require treatment appropriate to them, but need not be considered in this connection.

American Laryngological Association. — The following officers for 1902 were chosen: President, J. W. Farlow of Boston; first vice-president, J. W. Gleitsman of New York; second vice-president, D. Braden Kyle of Philadelphia; secretary and treasurer, James E. Newcomb of New York City; librarian, Joseph H. Bryan of Washington; member of council, Henry L. Swain of New Haven. Papers were read by Dr. Gleitsman; Dr. T. R. French of Brooklyn; Dr. F. H. Bosworth of New York; J. H. Goodale of Boston; C. H. Knight of New York; Carl Seiler of Philadelphia; W. K. Simpson of New York; Dr. A. W. Watson of Philadelphia; Dr. Farlow and Dr. Wyatt Wingrave of of New York. It was voted to hold the next annnal meeting in Boston about June 1, 1902.

WHAT IS BOVININE, ITS COMPOSITION, AND METHOD OF PREPARATION? — AN INDEPENDENT INVESTIGATOR'S DISCOVERIES.

BY C. W. CANANS, B.S., M.D., ORKNEY SPRINGS, VA.

At one of our medical meetings last year, while speaking of the treatment of cholera infantum and allied diseases of childhood, I spoke of the therapeutical indications of bovinine and the confidence I placed in it. That it was especially indicated in all conditions where other forms of nourishment failed to be retained or were digested with difficulty, and where the vitality of the patient was already at a low ebb.

The few sentences above embody all I said about bovinine, as my subject was cholera infantum and its treatment, and I had already outlined several lines of treatment to meet the indications in various forms of the disease. My mention and advocacy of bovinine were bitterly attacked by two brother physicians, to my great surprise. They claimed, among other things, that it did not contain blood of animals as its name implied, and as was generally supposed by many members of the profession. That no ox blood entered into its composition; but on the other hand it was composed of chemicals so combined as to deceive the majority of the profession, and it was only those who took great pains to analyze it who knew better. It was further said that this chemical compound was without doubt harmful to the human organism even in a healthy condition. That this fraud was "boosted" by its originators and advocates as a money-making scheme. One of these learned chemists said he had prescribed it once in a case of acute gastritis of a child, and the patient died a few hours afterwards.

The other acknowledged that he had never prescribed the preparation, but was satisfied that its virtues were purely imaginary on the part of those who had done so.

That he could not say definitely as to its composition, but admitting that it was beef blood, he thought any other simple remedy would be more likely to be retained and decidedly more beneficial to the patient. There were many other things said, but the above includes the substance.

While I was as one thunderstruck, I defended bovinine the best I could; yet at that time I had only the clinical evidence of others as well as myself, who had prescribed it with good results, to

place before my antagonists. But this was not the evidence I needed at this time, and I am sorry that I was so ignorant as to the composition of a formula so old and so often promulgated. I had begun to prescribe it upon the clinical experience of many able physicians, and the results had been all I could wish; so I never took the time to investigate its composition. Therefore I could produce no positive proof of what it contained or how it was manufactured; and this was what I desired so to prove. Then and there I resolved to thoroughly investigate these points, that I might know the truth, and I hope some day to convince these learned followers of Æsculapius. I wrote to a number of prominent physicians, and while the evidence they offered was in every case in favor of bovinine, they were principally clinical reports. I also wrote to The Bovinine Company for literature, and they sent us the formula and invited us to come to Chicago during the fall of each year and see them manufacture it. I continued these investigations until I was thoroughly satisfied, and will give below the composition of bovinine and briefly its process of manufacture.

Formula for bovinine, as copied from record book:

Fibrinated bullock's blood, 65 per cent.

Desiccated egg albumen, 19 per cent.

Old Bourbon whiskey, 10 per cent.

Chemically pure glycerine, 5 per cent.

Chemically pure boracic acid, 1 per cent.

Total, 100.

The plant where bovinine is made is in Chicago. The blood used is arterial, and that from steers who are sound in every respect. This blood is caught by the world-renowned Armour people; only the first gush after the throat is cut being used. The blood so caught is then taken to the plant at 1314 Bronson Street; here it is agitated and mixed in tanks holding 30 barrels each, by steam paddles which blend and render limpid and bland the preparation.

The pure white of eggs adds greatly to the efficacy of the product. It soothes the irritated stomach and intestinal canal, and at the same time is highly nutritious. Pure glycerine is a valuable antiseptic, and is also nutritious, while the four-year-old Bourbon whiskey is stimulating and at the same time prevents retrograde tissue-metamorphosis. The small per cent. of boracic acid can only act as a mild antiseptic.

The value of a pure article of bullock's blood as a physiological agent to sustain the vital forces has been proven over and over again, and needs no comment by me. I have not gone into the minute description of the process of this product because I did not think it necesary, and if any physician who reads this doubts any part of it, or would like to know more about the details, he should go to Chicago during the months of October and November (this being the best time adapted for its manufacture), and see for himself; he will be welcome.

These investigations have been made purely to ascertain the truth, and that I might be better posted in reference to the composition of such a valuable preparation as bovinine in the future.

The Ammoniacal Blister.—The process of blistering with ammonia, which is very rapid, is thus described in the *Agenda-médical* for 1901: Pour from eight to ten drops of very strong ammonia water into a shallow watch-glass, cover the liquid with a piece of linen a little smaller than the glass, and apply to the skin. Sometimes a coin is used instead of the watch-glass.—*Ex.*

Smallpox in Suffern.—Dr. Johnson, Secretary of the State Board of Health Commission, has investigated a complaint made by the health authorities of New Jersey, to the effect that smallpox was being brought into that State from this State, and that the disease had been traced to Suffern, N. Y. Dr. A. S. Zabriskie is health officer of Suffern, and he was asked some time ago by the State Health Department what the conditions were. He replied that there was no smallpox there, but that there was a number of cases of "Cuban itch." Investigation, however, showed that these cases were in every instance smallpox. Dr. Zabriskie, however, insisted that there was no smallpox. Conditions in Suffern are said to be serious. In one family there are six cases. It is also believed that the disease is being carried not only into New Jersey, but into New York City and other localities.—*Ex.*

GENERAL CONSIDERATIONS OF TREATMENT OF PLACENTA PREVIA.*

BY CHARLES P. NOBLE, M.D., PHILADELPHIA, PA.

Before considering the various methods in vogue for the treatment of placenta previa, it will be well to consider the results to mother and child which have been secured by treatment and without treatment. King† reports thirty-three cases in which no treatment was used. In eleven there was complete and in eleven partial placental presentation, and in eleven this was not noted. In fourteen the hemorrhage was moderate, in six profuse, and in thirteen not reported. The maternal mortality was thirty-three per cent. The fetal mortality was fifty-eight per cent. The older series of published statistics usually give the maternal mortality as from forty to fifty per cent., and the fetal mortality as being from fifty to sixty-five or even seventy-five per cent. These statistics are in marked contrast with those of more recent authorities, particularly those who have in general followed the teaching of Greenhalgh and Thomas to induce premature labor when the diagnosis was made, especially after the viability of the fetus; and also the teaching of Braxton Hicks that cases accompanied by considerable hemorrhage should be treated by promptly performing bi-polar version and bringing down a leg, making use of the breech of the fetus as a tampon; and also, it may be added, who have accepted, at least in part, the teaching of Robert Barnes concerning the advisability of partially detaching the placenta immediately adjacent to the os as a preliminary to delivery. So long ago as 1884 Lomer reported a series of ninety-three cases treated by the Braxton Hicks method, by Hofmeier, Behm and himself, with one death—slightly over one per cent. He also reported eighty-five cases treated by the same method by eight other men, with seven deaths; or a total of one hundred and seventy-eight cases, with a mortality of four and a half per cent.‡ The fetal mortality in this series of cases was sixty per cent. The one hundred and seventy-eight cases were all treated by bi-polar version.

The next largest series of cases, and perhaps the largest treated

*Read before the Philadelphia County Medical Society, March 13, 1901.

†King, E. W. "Statistics of Placenta Previa, Collected from the Physicians in the State of Indiana."—*American Journal of Obstetrics*, 1880, p. 765.

‡Lomer, Richard. "On the Combined Turning in the Treatment of Placenta Previa."—*American Journal of Obstetrics*, 1884, vol. lvii., p. 1247.

by a single practitioner, is that of Murphy, According to Parvin,* in 1889, Murphy† had thirty-eight cases, with two maternal deaths; and in 1895 he had sixty-one cases, with only two deaths, and one of the two was moribund when first seen.

The inference is fair that without treatment or with treatment by former methods the maternal mortality is from thirty to fifty per cent., and the fetal mortality from fifty to sixty-five per cent. Also that this tremendous mortality for the mother has been reduced by the teaching of Greenhalgh and Thomas, Braxton Hicks and Barnes, to five per cent. or less. A corresponding improvement in the chances of the child has not been noted, and this still exceeds fifty per eent.

The dangers of hemorrhage to the mother are of two kinds: one, which is usually considered, that of sudden tremendous hemorrhage during the dilatation of the lower uterine segment, with sudden death from anemia or syncope; another that of the continued loss of moderate quantities of blood, which gradually reduces the vitality of the mother, so that she succumbs to a moderate hemorrhage during labor. A third risk is of scarcely less importance than either of these—namely, the danger of infection. This is partly due to the fact that patients reduced by hemorrhage are especially susceptible to infection, and also to the fact that practitioners have been too prone to lose their judgment in treating placenta previa and to use methods which perhaps prevented the patient dying from hemorrhage, only to have her succemb to infection.

The induction of premature labor is probably the most important single step in the treatment of placenta previa. It guards the patient against the repeated loss of moderate amounts of blood, with progressive anemia; and what is even of more imimportance, as the practitioner elects the time when labor is to be induced, he is enabled to secure adequate professional assistance. After the viability of the child this method cannot be objected to on the ground that it sacrifices the child's prospects for being born alive, as the fetal mortality has not been higher under this method of treatment than under the plan of non-interference. Prior to the seventh month of pregnancy the hemorrhages are seldom sufficiently grave to endanger the life of the mother. When moderate in amount, and when the patient can

*Parvin, T. Science and Art of Obstetrics, 1890, p. 350.
†American Text-book of Obstetrics, p. 596.

be properly watched, it is permissible to allow the pregnancy to continue until the viability of the child. But when the hemorrhage is abundant, or the patient so situated that she cannot have professional supervision, the interests of the mother require that pregnancy shall be terminated. As Murphy's success in dealing with placenta previa has perhaps been greater than that of any other practitioner in a large series of cases, we cannot do better than to give his practice in his own words:

"The practice which I follow consists, not in a single method for stopping hemorrhage, but in several, and it is this: In the first place, in every one of my own patients, or in those that I am consulted about, when hemorrhage occurs after the seventh month, when it is clearly not from the cervix or os, and when there is presumptive evidence that it is from the placenta previa, I advise premature labor to be introduced; or before that period of pregnancy when the hemorrhage is severe, continuous, or frequently recurring. In cases that permit of a little delay from the symptoms not being very urgent, I appoint a time when I can give a few hours' continuous attendance—two hours are generally sufficient—as once you commence to induce labor I consider it necessary to remain with the patient until delivery is accomplished, and when the case does not require instant action one can fix his own time and can have what assistance he requires.

"I find having an assistant a great advantage, and by thus arranging a definite time practitioners can secure the services of a specialist or fellow practitioner to help them and to share the responsibility. On examination, if the cervix will permit it, I introduce my finger, separate the placenta all around, and then put in a Barnes bag; and if not, I gently and slowly insinuate my finger through the os, which I have always found easy of accomplishment, never having had recourse to the preliminary introduction of a tent, though in inducing labor for other causes I have frequently had to introduce tupelo tents. Having thus dilated the cervix with my finger, I separate the placenta freely around the internal os, and at once introduce a Barnes bag. I slowly fill it with water—and here let me give a practical hint on the use of hydrostatic bags which I do not remember to have seen mentioned in any of the text-books. When the bag is well through the cervix it is very difficult to say how full it is, and by continuing the injection it may very easily be burst, as

once happened to myself, and has, I know, happened to many others; so, to avoid this, it is desirable to ascertain and remember how many syringefuls each bag requires before being fully dilated, and then carefully to inject only that number. Having thus filled the bag, I wait patiently until the os is well dilated around it, and before introducing another one separate the placenta further should the hemorrhage continue, which it does not provided the placenta has been sufficiently separated at first. After the bag has been introduced for some time the pains come on fairly well, though as a rule they are not very strong.

"I thus proceed until the os is fully dilated, when I give ergot freely, and decide what is the most suitable course to follow. If the placenta is lateral or marginal, and the pains fairly strong, I rupture the membranes and leave the case to nature; or if the head is well into the pelvis I may apply the forceps; but in the great majority of cases I perform version, preferably by the combined method, and deliver the child as quickly as is consistent with the safety of the mother."*

Murphy's experience with the use of the Barnes bag for the dilatation of the cervix has been more satisfactory than that of most practitioners, and at the present time many would prefer to substitute the manual dilatation of the cervix, the technique of which has been elaborated by Harris† of Patterson, N. J. This consists of introducing the entire hand within the vagina, then introducing one finger through the os, then two fingers or a finger and thumb, as best can be accomplished. Then with the finger and thumb introduced, the finger is flexed against the thumb, which affords counter pressure, and dilatation is begun. As the cervix dilates, first two, then three, and later four fingers are introduced, constantly making use of the principle of using the thumb for counter pressure while exerting force by the flexion of the fingers. In this way the cervix almost invariably can be dilated without using violence and without rupturing the cervix. When a fair amount of dilatation has been accomplished, the rules laid down by Murphy cannot be improved upon—that is, when the placenta is lateral or marginal the case may be left to nature or to nature assisted by the forceps; and in the more

*_Medical Press and Circular_, 1885, p. 208.

†Harris, P. A. "A Method of Performing Rapid Manual Dilatation of the Os Uteri, and its Advantages in the Treatment of Placenta Previa."—_American Journal of Obstetrics_, vol. xxix., No. 1.

marked cases, where the placental implantation is partial or central, resort shall be made at once to bi-polar version. This is the sheet-anchor of safety in all cases in which hemorrhage is a marked feature, as in no other way can the hemorrhage be so promptly arrested as by bringing down a leg and using the buttocks of the child as a tampon to make pressure directly against the bleeding surface.

It is unnecessary to enlarge upon the conduct of those cases which can be left to nature or to nature assisted by the forceps, as the ordinary principles of good obstetric practice apply to these cases.

When bi-polar version is employed, the recommendations of Hicks himself, which have been strongly emphasized by Lomer, should be strictly followed; that is, when bi-polar version has been accomplished, and the leg brought down until the pressure of the breech arrests the hemorrhage, that the case shall be left to nature, or that at the most only gentle assistance by occasional traction upon the leg shall be given. This is the more important when it has been necessary to employ version before securing dilatation of the os. If this practice is not followed, the head is arrested by the undilated cervix, causing delay in the delivery of the head and the sacrifice of the life of the child. The rapid delivery of the child is only permissible when the cervix is dilated or dilatable and the life of the child is threatened, as indicated by increased rapidity of the fetal heart beat. Under these circumstances rapid delivery in the interests of the child may be brought about. When this is done, traction upon the trunk of the child should be supplemented by pressure upon the head from above by an assistant, in order to maintain flexion and to prevent the extension of the head and its arrest within the grasp of the cervix; in other words, the same principles which apply to the management of all breech presentations.

The use of chloroform or ether to facilitate the dilatation of the os and bi-polar version is to be recommended.

The tampon, which was the treatment most relied upon formerly, has definitely lost favor, and should be employed only as a temporary means of arresting hemorrhage until assistance can be summoned and more efficient methods of treatment carried out. This estimate of the tampon is so universally held that it is unnecessary to say more about it. When employed, the vagina

should be packed full with either sterilized gauze or sterilized cotton wrung out of a solution of mercuric chloride, 1:10,000. It is best introduced with the patient in the Sims position, and the perineum retracted with the Sims speculum. The tampon should remain in place only long enough to prepare for more efficient treatment, or to secure professional assistance, and during this time, even when no external hemorrhage is taking place, it should not be relied upon, as the blood may be retained above it or within the cavity of the uterus. For this reason the condition and the pulse of the patient should be watched for symptoms of internal hemorrhage.

The Cæsarian section has been recommended and carried out in cases of placenta previa by Lawson Tait and others. As one of the papers of the evening is devoted to this subject, we shall not discuss it further than to say that it finds its best indication in cases of complete placenta previa in primapara in which there is ground to expect great difficulty in delivery owing to undilated or undilatable soft parts.

In the past, one of the greatest dangers of placenta previa has been that of infection. Because of the greatly increased liability of infection on the part of a patient suffering from acute anemia, the most rigid asepsis is demanded in the management of cases of placenta previa. The induction of premature labor and the orderly conduct of the delivery, with proper assistance, affords the best opportunity to carry out a rigid aseptic technique. The vagina, external genitals, and the adjacent surface of the thighs, should be scrubbed with soap and water and thoroughly douched with bichloride solution as a preliminary to the obstetrical manipulations. The hands of the obstetrician should be sterilized by scrubbing and by soaking them for at least three minutes in corrosive sublimate solution, 1:1,000. The use of rubber gloves sterilized by boiling is especially to be commended in the management of these cases.

Illinois State Medical Society.—The following are the officers elected: President, Dr. J. T. McAnnally, Carbondale; vice-president, Dr. M. L. Harris, Chicago; second vice-president, Dr. J. W. Hensley, Peoria; secretary, Dr. E. W. Weiss, Ottawa; assistant secretary, Dr. C. D. Center, Quincy; treasurer, Dr. E. J. Brown, Decatur. Qninoy was chosen for the next meeting place.

CORRESPONDENCE.

LESSONS FROM THE YELLOW FEVER SHIP "CHILE."

SIR—My brother, Mr. P.H. Ashmead, C.E., was one of a party of fourteen civil engineers returning to their construction work on the Guayaquil and Quito Railroad, Ecuador, when the yellow fever broke out on the Pacific Steam Navigation Company's steamer "Chile" on the voyage down from Panama last summer.

He has kindly given me the following notes of his experience:

"On July 9th left Panama. July 11th a Chinaman was taken sick at 10 A.M., and died at 11. He was buried at sea. This Chinaman was one of two sick Chinaman who had been carried aboard sick at Panama. The death was reported to the passengers as from 'heart disease.' The same day an Italian steerage passenger was reported to be sick with 'fever.' Everyone questions whether it is Yellow Jack. However, the doctor says that it is 'malaria and alcoholism.' On July 13 we come to anchor at Puna. The quarantine doctor orders us on the quarantine boat for fifteen days. We send a ship's boat to Guayaquil for orders from the steamship agent; it returns at 2 A.M. with orders to proceed south. This Puna quarantine physician had refused to accept the statement of the ship's doctor that the death had not been due to yellow fever. He thought that there should have been required a certificate from a Panama doctor as as to the sickness of the two Chinamen who had been brought aboard. The Ecuadorian authorities offered Captain Hay the privilege of putting his passengers on a small two-masted schooner near the island of Puna, which they called their quarantine station, latitude 3 degrees south, where mosquitoes were frightfully prevalent, but the passengers luckily refused to leave the ship.

"On July 15th we anchor at Paita, Peru; a boat from shore brings the port Commandante. As we report a death, he refuses to receive us, and orders to be put out a small launch with two days' provisions for us, and he allows our ship's boat to go to it only after the one from shore had left it. Sailed at noon for Callao, Peru. We are all on a nervous strain. Two Italians in the steerage died last night. The ship's officers claim that one died of 'pneumonia,' the other from fright. Both are buried

at sea off Paita. All the passengers of the steerage are panic stricken, who are mostly Italians. The officers take them aft and put them in our first cabin.

"July 16. Another Italian has died. He was buried an hour after death. The ship's doctor is beside himself with terror, and is being severely criticized. He comes to the dinner table without washing, and even the officials who sewed the bodies in the canvases for burial merely wash their hands in carbolic acid solution. Young Mr. H. A. Loos, a Ph.D. graduate of Columbia College, New York, is very ill in the first cabin; his own diagnosis is 'yellow fever.' Another Italian is stricken in the first cabin, and is being nursed by a countryman of his. He gets better, but Loos died in the night, and was buried at 5 A.M. Two first-class passengers are requested by the captain to be witnesses of Loos's burial. Everyone questions why the company did not have a competent physician aboard. It has just been discovered that the so-called ship's surgeon has no diploma. We arrive at Callao harbor at 5 P.M. No boat meets us from shore. Eight stowaways are found to-night.

"July 18. A port boat came alongside at 8:30 A.M. The captain reports to it six deaths, and gives the details, and says that now all aboard are well. The agent of the company, when he hears of the six deaths, only remains long enough to secure the captain's requisition for provisions, water and coal. Now we are abandoned as a pest ship. Soon after the port boat left us a Chinese boy is found stark dead under some sail-cloths. We run up a signal: 'Going to sea to bury a man.' The body was apparently not sufficiently weighted when it was thrown overboard, as we could see it with marine glasses afar off while returning to our anchorage. The passengers have now not much appetite, and panicky feeling increases. We get no word from shore, and are not allowed to send any.

"On July 19th we are still at this anchorage. The Italian first-class passenger who was nursed by his countryman is now out of his room and mingles with the rest of us. He is allowed to spend the day in the music hall. From shore there comes a boat, which anchors near us; it contains provisions. A guard boat is placed over us, with men armed with rifles. Our captain is fined $1,000 for making false health report, and for not having on board a regular physician. We now try to com-

municate with the shore to charter or buy a steamer or sailing vessel to take off our engineer corps.

"July 20. All are well, but no answer comes from shore. We are told, however, that we can get no help. A petition is prepared for the United States consul, and another one for the Pacific Steam Navigation Company's agent. We complain about the doctor and our treatment aboard the ship. The captain demands more provisions, water and coal to enable him to leave port, and refuses to obey the order to go out until he gets enough. We hear to-night that the medical authorities of Callao will let us remain at anchorage, but that the national health authorities at Lima order us to sail at once. It will require a joint meeting of these two bodies to decide for us.

"July 21. No news yet. Two more Italians are sick, and late to-night the company orders the captain to sail.

"July 22. At sea again. The Italians are reported to be very low. Two native women are caring for them, even doctoring them, as the ship's doctor has refused longer to risk his life, and he says that it could be of no use, as they will die anyhow.

"July 23. We are awakened at break of day by the propeller stopping, and on inquiry are informed that one of the Italians had died and was being buried. (The Italians who died were relatives.)

"July 24. Thank God, it is growing colder. No new sickness reported.

"July 25. We arrive in the harbor of Arica, Chili, but are not allowed to land, nor will a boat come nearer than 100 feet. A small boat is sent from shore with provisions for us. It is anchored and isolated at a distance before our sailors are allowed to approach it. The Chilians apparently are more afraid of us than were the Peruvians.

"July 26. At sea again.

"July 27. When approached port at Pisaqua a Chilian gunboat fired a shot and run up a flag to tell us 'Do not anchor.' Three boats, each with four men with rifles, are put over guard to us; lighters with coal are sent from shore. A steam tug, when attempting to pass between a lighter and our ship, is held up by these guard boats, and is ordered to return to shore, or be fired upon. Sailed for Valparaiso after getting coal.

"July 29. At sea, and all reported well.

"August 1. We arrive at Valparaiso at 4 P.M. Here four Chilan physicians come aboard and inspect all passengers and crew, and afterwards formally receive the ship. Most all passengers go ashore to-night.

"Résumé: There were eight deaths from yellow fever—the two Chinamen who had been carried aboard sick at Panama without a certificate of their illness, five steerage Italians, and one American, a first-class passenger. This last, and another, an Italian, were the only ones sick in the first-class cabin. At Guayaquil, Ecuador, 38 bags of mail were sent ashore without any disinfection. The authorities had sent aboard a beer bottle of carbolic acid for the purpose, but it was not used. At Callao, Peru, the request of the passengers to have a competent doctor put aboard, for whose service they agreed to pay, was refused. The physician had even been engaged. The steamship people said that it would make a strong case against them for damages were the request granted, as the law required them to have a qualified physician on board in all tropical climates. Their own doctor had palmed himself off as a graduated physician until seven deaths had occurred. Then he, through fright, acknowledged he was only a druggist.

"There was no disinfection aboard at any time, and *no contagion either*. For the infected Italian of the steerage when transferred to the first cabin did not infect the other first-class passengers.

"Had the passengers been put off, as the Ecuadorian authorities advised, on the notoriously mosquito-infested island of Puna, it is probable that those mosquitoes would have become infected with yellow fever germs and transmitted the disease to all of those who otherwise escaped. The 38 bags of mail put ashore at Guayaquil did not carry any infection, as it was afterwards learned.

"The ship, with her infected mosquitoes from Panama, as she went south to colder climates, naturally became rid of her plague, as the mosquitoes were gradually killed off by the change to colder climate; when the ship arrived at Valparaiso the thermometer was 49° F."

New York, Albert S. Ashmead, M.D.

THE CAUSE OF RHUS POISONING.

WASHINGTON, D. C., June 5, 1901.

Editor ST. LOUIS MEDICAL AND SURGICAL JOURNAL:

DEAR SIR: The JOURNAL is usually up to-date, but the last number contains a quotation which does not give the best information on the present state of our art in reference to rhus poisoning, page 302, June, 1901, issue. It is now well established that the poisonous principle of this plant is not an acid, but an oil, non-volatile, called toxicodendrol. As an oil it is not soluble in water, and hence all watery solutions fail to produce the full benefit, and recourse must be had for the best treatment to an alcoholic solution of lead acetate in cases where the poison is fresh. The place should be washed with alcohol to remove as much of the oil as possible, and then the solution of lead salt applied on fabric or absorbent cotton and allowed to remain on till dry and renewed. I have seen the poison applied and treated after varying intervals with the alcohol and lead salt, and the amount of poisonous effect was exactly proportionate to the interval elapsing before treatment. Of course after a constitutional effect is produced the local treatment is of little or no use. See for full accounts of the nature and treatment of the vegetable poison, V. K. Chestnut on Principal Poisonous Plants of the United States, Bulletin No. 20 of Department of Agriculture, Division of Botany, p. 37 and elsewhere, Pfaff. WM. H. SEAMAN, M.D.

PAUPER PRACTICE AT PANA, ILL.

PANA, ILL., May 20, 1901.

TO THE EDITOR: The following agreement has been signed by every physician in this city, and it has been published in the two daily papers here, and the universal comment excited by its publication has been favorable to the stand taken by the physicians; the people say that it is just and right; that the county is not a a pauper and should pay physicians prices ruling and established in the neighborhood as it pays the grocer for his goods, the mechanic for his labor and material, and for services rendered by supervisors and road commissioners when on duty for the county; that physicians pay their taxes like other people, and, besides, render to the public much other service for which they are not remunerated at all.

PANA, ILL., May 5, 1901.

We, the undersigned physicians of Pana, do hereby mutually promise and agree among ourselves and to each other to the following:

1. That we will not bid for pauper practice.

2. That we will not attend the paupers at a less rate than the regular established and recognized fee bill of Pana.

N. B.—It is also understood that no one physician shall be favored in the distribution of the pauper practice, but that the patient shall have the privilege of choosing his own physician.

No. 102 Second Street. J. J. CONNER, M.D.

AUTOMATIC SAFETY-VALVE STOPPER—A DEVICE PREVENTING THE BURSTING OF PEROXIDE OF HYDROGEN BOTTLES.

The great trouble with peroxide preparations is that if the containers are tightly corked the oxygen which separates and is set free slowly but constantly, as time passes, accumulates until the bottles can no longer stand the pressure and burst, or the corks

a

(*a*) Puncture.

Fig. 3. Illustrates the cross section of the safety valve rubber cork, showing the wooden top and the puncture at the bottom. A thin strip of paraffined paper is inserted into the puncture.

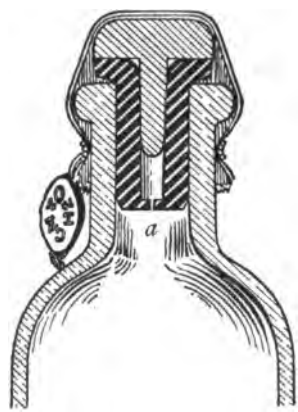
are driven out. Of the two alternatives the bursting of the bottles is the most objectionable feature on account of the danger attached to it.

Containers of the hydrogen peroxide, U. S. P., which is a comparatively weak solution of H_2O_2, yielding but 10 volumes of oxygen, may be closed with a wooden stopper, which, by the porous nature of the material, permits the escape of the gas almost as soon as it is set free, thus avoiding explosion and rupture of the bottles or the driving out of the corks.

While these wooden stoppers answer very well for solutions of

H_2O_2, responding to 10 volumes of oxygen or less, with stronger solutions, such, for instance, as Marchand's peroxide of hydrodrogen medicinal (15 volumes), or his hydrozone (30 volumes of oxygen), they are quickly attacked by the solutions, as are also the ordinary corks, and within four months are completely oxidized—not merely bleached, but rendered so soft that they cut like pot cheese. From that time the goods are unfit for sale.

In order to prevent these difficulties, and especially to obviate the bursting of the bottles containing hydrozone, Mr. Marchand, the manufacturer of that article and other well-known brands of



(*a*) Puncture.

Fig. 4. Illustrates the cross section of a bottle corked and capped with vegetable parchment and paraffined muslin; no wire.

peroxide of hydrogen, has devised an ingenious stopper which he calls the "automatic safety-valve rubber cork," and which is shown in the illustration.

The material of the stopper is vulcanized rubber. The beveled end is punctured through in such a manner that when the pressure in the bottle rises above five to eight pounds to the square inch (according to the thickness of the rubber at the bottom, which may vary slightly), the excess of free oxygen finds free egress and thus relieves the tension.

This device is first inserted, and a plug of porous wood is then driven in, thus stiffening the rubber and completing the operation of "corking."

The capping consists of vegetable parchment covered with paraffined muslin, no wiring being used or needed.

It is easily seen that this style of closing the bottle obviates the possibility of bursting. Assuming even that through some imperfection of the stopper the puncture should close, as soon as the pressure rises to a point far within that required for rupture of the bottle, the stopper, not being wired down, will yield and be forced out.

Retail druggists, who have for so many years been the chief sufferers and losers from the bursting of the peroxide containers, and the deterioration of the substance otherwise from the causes indicated above, will welcome Mr. Marchand's invention as a happy solution of what has to them been a very serious problem in the past, since it will enable them to supply their trade with

Fig. 5. Illustrates the top of the bottle with the seal.

the higher solutions of hydrogen peroxide, and especially that preparation of Marchand's for which the stopper was particularly designed, "hydrozone," which carries 30 volumes of oxygen.

The device described above—the automatic safety-valve stopper—having entirely obviated the danger arising from the explosion of bottles in handling, there is certain to be a largely increased demand for Marchand's concentrated solutions of the peroxide of hydrogen (which alone will be corked with the patented stopper), since physicians anxious to obtain quick results will never prescribe anything but the most active solutions, or those richest in active oxygen, and since druggists will be protected absolutely against loss by deterioration or explosion. The medical profession is being thoroughly advised of Mr. Marchand's new method of closing his bottles of "peroxide of

hydrogen medicinal" and "hydrozone," and will be certain to avail themselves of the advantages thus guaranteed them.—April, 1901, issue of *National Druggist of St. Louis.*

NOTE.—Remember there is no popping when corks are removed.

SHALL PHYSICIANS PRESCRIBE PROPRIETARY REMEDIES?

The modern tendency of the practice of medicine is to specialism. A minute and intimate study of detail is not possible with the general worker in any department. The simple limitation of time alone prevents it. Life—as the saying goes—is too short. This same tendency, which has done more than any other one factor to advance the art of medicine to the true standing of a science, is also apparent in every important interest about us. "Attention to detail," says Wellington, "gained the battle of Waterloo." So specialism, by concentration of thought and purpose, has given power to the world through the perfection of varied commercial products. By unremitting study and research, by constant application, the persistent delver in any one line discovers refinements of manipulation not observed by the casual worker, no matter what may be the general skill of the latter. As this fact is recognized when once attention is directed to it, it seems remarkable that certain physicians should take exception to a proprietary preparation—simply because it is such—without regard to merit. Often, in fact, carelessly classing such preparations with patented, secret nostrums offered as universal cure-alls. It would seem that there is engendered in the minds of some an antagonistic spirit against any preparation commercially presented, as if the underlying impetus was undignified and of some ulterior motive unworthy of scientific recognition. So biased are some practitioners that they construe it as unethical to prescribe anything that has not been prepared from their own prescription, or that has not been made by their neighboring pharmacist. Yet this same class will adopt the ideas and the representations of others, and will presuppose some local talent more competent to concoct an extempore combination that is "just as good" as that which has been perfected only after great expenditure of time and money, and which is maintained supreme in spite of open competition. They are also equally ready to condemn the true

because their false attempts at substitution prove inert and impotent.

No intelligent physician or pharmacist will deny that there are innumerable preparations in daily use, and popularly recommended and prescribed from every drug store, that are better prepared under special facilities of manufacture than are practicable in the ordinary laboratory. Bicarbonate of soda, rochelle salt, ether, fluid extract of ergot, quinine, and many other substances are best prepared by those who have especially fitted machinery for such processes of manufacture. But the result is not uniform with all chemical processes, nor in all special laboratories. Tincture of iron is one of the more ordinary preparations of the Pharmacopeia, yet how many educated pharmacists can prepare it so it will be uniform with a standard? Indeed, the day of home-made pharmaceuticals has passed. The array of bottles of macerating drugs in the cellars of drug stores long since gave place to the more speedy and more scientific method of percolation, but the advent of the manufacturing pharmacist has superseded this with more uniform preparations. Yet different manufacturers, under the same manipulation and using similar appliances, turn out products of varying quality and differing from their competitors who are presumably possessed of like general ability. So throughout a vast quantity of substances of economic use, the resultant wish would be, among experts, for only the product of a certain manufacture. It is a law of nature that the fittest shall survive.

If this view of the question be correct, why should it be presumed—as is at times asserted—that so subtle a preparation as wine of coca may be extemporaneously made that will equal the skillfully prepared product made with all the advantages and resources of the establishment of Mariani of Paris, France? Here is a laboratory exclusively devoted to the production of coca preparations. This chemist has devoted nearly half a century to the perfection of the famous tonic wine which rightly bears his name. While Vin Mariani is a proprietary preparation, it is in no sense a secret remedy, but is prepared after the French codex to present the force-giving qualities of coca with the mild tonic of a wholesome wine. In this form it is generally admitted to represent not only the true properties of coca, but to be the most available form for administration of that substance. The re-

search which devised this unique combination, the money expended in experimentation leading to its perfection, the constant care in selection of appropriate coca leaves, and the choice of a suitable wine—both of which are watched by experts during their development—the immense pecuniary outlay in processes of manufacture and in distribution, can only be adequately repaid through the success following the general acceptance of a worthy product. That extreme care has brought perfection, followed by success, entitles its originator to reap the full benefit accruing from the commercial distinction which has made the name Mariani synonymous with coca. That Vin Mariani is conscientiously prepared, that it is introduced to the medical profession in an ethical way, that it has stood not alone the mere test of time, but is constantly increasing in sphere of usefulness, that its advocacy has steadfastly sustained interest in the parent plant when sensational assertions have led some to doubt the efficacy of coca, are but incidental yet potent reasons why its support as endorsed by hundreds of thousands of physicians throughout the world is not only scientifically correct, but purely as ethical as is the use of any other pharmaceutical preparation. Vin Mariani, as a reliable adjuvant in the time of need to support the patient, with or without other remedial measures, should not only be considered a welcome boon, but should be championed by every conscientious physician who believes that worth makes might, while all such will equally agree that such substitution is an affront which should excite personal condemnation.

Prevalence of Smallpox in the United States.—According to the Public Health Reports issued May 31, 1901, by the U. S. Marine-Hospital Service, 25,355 cases of smallpox occurred in the United States from December 28, 1900, to May 31, 1901. For the corresponding period of 1900, 11,448 cases were reported. Of the total 25,355 cases this year 427 died, a mortality of a little over 1.5 per cent. For the same period last year this was over 5 per cent. The ten States showing the greatest figures for 1901 are as follows: Tennessee, 4,296; Kansas, 4,033; Louisiana, 3,228; Minnesota, 3,071; Colorado, 2,197; Ohio, 1,894; New York, 935; Indiana and North Carolina, 834 each; Nebraska, 754.—*Ex.*

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A. H. OHMANN-DUMESNIL. A.M., M.D.,
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EDITORIAL.

THOMAS FRAZIER RUMBOLD, M.D.

THOMAS FRAZIER RUMBOLD, M.D.

May 23, 1901, was a memorable epoch for the JOURNAL, when Dr. Thomas F. Rumbold departed this life. He was at one time the editor and proprietor of the JOURNAL, and he spent time, money and energy to rebuild a publication which seemed to be in a decadence. Thanks to his efforts it rose again stronger than it had ever been in its long and honorable career, and to-day it thrives and flourishes as a result of his efforts, which have been continued by his successors.

Doctor Thomas Frazier Rumbold was born in Aberdeen, Scotland, October 13, 1830. His father moved to America in 1834 and settled in Montreal, Canada. The year following he moved to the United States and with three other pioneers founded the city of Davenport, Ia.

JOHN MEDICAL LIBRARY MAY 13 1902

In 1846 and 1847 he taught school at Davenport. He entered Iowa College in 1848. At the outbreak of the Civil War he entered the Union Army as a surgeon. In 1862 he was assigned to the United States Hospital at Jefferson Barracks. After the war he resigned his position in order to pursue his studies of the nose and throat.

In 1866 he opened an office in St. Louis, and practiced here up to the time of his death, with the exception of two years, which he spent in San Francisco for his health.

At the time of his death Dr Rumbold was a member of the St. Louis Medical Society, the Missouri State Medical Association, the Medical Society of the County of San Francisco, Cal., the Medical Society of the State of California, the American Rhinological Association, Society of the Surgeons of the Eye, Ear, Throat and Nose of San Francisco, and honorary member of the Southeastern Missouri Medical Association. He was a delegate to the International Medical Congress in London in 1881, and in Copenhagen in 1884.

In his last hours the aged physician was surrounded by the immediate members of his family, among whom was his son Captain (Dr.) Frank M. Rumbold, who returned a week before from two years' service in the United States Army of the Philippines.

Dr. Rumbold's illness had been serious for two weeks before his son's return. Although his condition was critical he struggled against his approaching end, so that he might see his son before he passed away. After Captain Rumbold's arrival Dr. Rumbold appeared resigned and happy, though he sank gradually until his death.

Besides his son, Dr. Rumbold left five daughters — Mrs. H. P. Wilkinson, Miss Charlotte M. Rumbold, Miss Estelle J. I. Rumbold and Miss Catherine T. Rumbold of St. Louis, and Mrs. A. J. Houston of San Francisco.

Dr. Frank M. Rumbold will continue to attend to his father's practice.

THE NIGGER IN THE WOOD PILE.

We have received the following, which deserves careful perusal:

A REVOLUTION

IN THE PHYSICIAN'S POSITION TOWARDS THE PUBLIC IS AIMED AT BY THE NATIONAL HEALTH LEAGUE.

This League has for its benign object the promotion of public health by natural means. Its endorsers discard drugs and most surgical operations.

The promoters maintain that: (1) animals, in their free state, and hence without medical attendance, are perfectly healthy; and that (2) civilized races, who have been under the care of trained physicians for generations, are far below the normal standard of health, and hence are bound to speedily increase their demand for natural methods.

The League, in accounting for the terrible disparity existing between the health of man and that of the lower animals, points out the following causes:

(1) The branches taught in medical colleges lay too little stress upon etiology, preventive medicines and health preservation.

(2) The various medical schools are rather antagonistic to each other both as to theory and practice; and as there must be latent truths or principles belonging to all, these should be sought out and adopted by all for the common good of suffering humanity.

(3) The physician's fee under the present system is in direct ratio to the duration of the patient's illness, whereas it would seem to be good business policy at least to adopt a method of remuneration according to the physician's ability to ward off disease and keep his clientele in a state of robust health, especially as every physician knows that ill health results from transgressing nature's laws.

(4) In order to bring about this reasonable reform the League proposes two radical changes, viz.: the one indicated under No. 3; and the establishment of comparitive hospitals, where the various medical systems shall demonstrate their relative efficacy.

The League claims that physicians should be trained to become teachers of health. Large sanitariums are to be established everywhere for the recreation and recuperation of the masses, the physicians to be chiefly employed at these health-giving institutions, and drawing fixed salaries. It would thus be to the physi-

cian's interest to promote health by every conceivable means. Such a condition would place the doctor in proper harmony with his own conscience and the actual needs of the invalid world.

Suggestions, pro or con, are earnestly requested relative to this movement, and may be addressed to the Secretary of the

NATIONAL HEALTH LEAGUE,
823 Lexington Ave.,
New York City.

All communications will be impartially and confidentially considered. Sympathizers are invited to join the League; and physicans after acquiring the requisite training in natural methods, and *having sufficient capital to invest in the enterprise, will be placed at the head of such Institutes.* (Italics ours.)

It is in the concluding paragraph that the milk in the cocoanut lies. The absurdities and contradictions of the circular itself are amusing, but the money consideration to acquire a position is the paramount issue. We admire the assurance of the promoters of this scheme, who will no doubt succeed in some degree, as they are well acquainted with the gullibility of human nature, in which physicians certainly participate. May their golden dreams be fulfilled; but they will certainly eventually prove but dreams, perchance nightmares.

A Model of a Manila Hospital to be Exhibited at Washington, D. C.—Surgeon-General Sternberg has been advised of the shipment from Manila of an admirable model of Hospital No. 3. It will be placed in the Army Medical Museum at Washington, D. C. The model is built on the scale of 1 to 250, upon a single square of narra wood, and shows all elevations, drainage and sanitation. The model includes, besides Hospital No. 3, the hospital corps company of instruction and the hospital corps camp of casuals, which are adjacent and under the same command. The details are made from the original material of the buildings and walls which they represent. Every ward-room, office, tent, hydrant, tree, fence or ditch is reproduced in a miniature size. The gradation of the land surrounding and levels of drains are exact in proportion. It took two months to construct the model.—*Ex.*

MEDICAL PROGRESS.

DISEASES OF WOMEN AND CHILDREN.

Hydrotherapy in Disorders of the Menopause.—Gottschalk recommends, from personal observation in a number of cases, hot baths as a means of relieving the sweating and hot flushes and associated disturbances occurring at the menopause or after removal of the uterus or adnexa. The hot baths are administered at bedtime (duration twenty minutes). Three or four weeks' treatment was sufficient to effect a cure. He does not state exactly what temperatures were employed, but baths at 92° to 96° are best for these cases. Carefully graduated tonic treatment, consisting of wet-hand rubbing, cold friction, the friction mitt, cold wet-towel rubbing, and like measures, is of the greatest service.—*Modern Med.*

DERMATOLOGY AND SYPHILOLOGY.

The Finsen Treatment of Lupus.—It was long the practice to laugh at John of Gaddesden's treatment of disease by the use of the red rays of the solar spectrum; nevertheless, from 1492, when his "Rosa Anglica" was published, the treatment held its ground in public favor until the middle of the eighteenth century. De Foe refers to it in his novels as a usual domestic method of cure. The curative property of both the heat-giving red rays and of the chemical rays is strongly corroborated by Dr. Finsen, of Copenhagen, whose hospital is attracting patients suffering from lupus from every country in Europe. He has found that the chemical rays of the solar spectrum, blue, violet, and ultra-violet, have a marked bactericide power, and on this he bases his treatment. The technique adopted is thus described: On bright sunny days the patients are carried into the garden. They each have a nurse of their own who, during the hour they are under treatment, presses an odd-looking little apparatus on the part of the face or hand that is diseased. It consists of a plate of quartz and a plain convex lens of quartz, both framed in a conical brass ring, and with two tubes fixed between them. Cold water is kept running in one of these tubes and out at the other. The use of the apparatus is to force the blood from the skin on which it is pressed, and thus enable the

chemical rays to penetrate it more readily, while the water is there merely to keep the skin cool. By the side of the patient there is another apparatus, a large movable lens, fixed in a stand in such a position as to be in a direct line between the sun and the piece of skin requiring treatment. This lens is composed of two glasses—one plain, the other curved—framed in a brass ring, the space between them being filled with a weak solution of sulphate of copper. It condenses the sun's rays that fall on it, while the water it contains, together with the salt solution, intercepts the ultra-red, red, and yellow rays. Thus, practically, the only rays that pass through the lens, and therefore the only rays that reach the area of the skin requiring treatment, are the chemical; and as they are highly condensed they destroy the bacteria on which they fall. In the absence of sunlight, Dr. Finsen falls back on the use of electric light. He has found that the chemical rays intensify inflammatory skin diseases; and he confirms, from his own experience, the value of the red rays in the treatment of small-pox. Thus, after 500 years, he confirms the accuracy of that conscientious observer, John of Gaddesden; and by an extension of his principle of light treatment confers a distinct blessing on suffering humanity.—*Medical Press.*

MEDICO-LEGAL.

Medico-legal Relations of Opium Inebriety.— T. D. Crothers, in the *Journal of the American Medical Association*, says that there is an increasing number of cases of opium addiction associated with crime. Medical experts and judges hesitate to recognize irresponsibility from opium taking alone, and attempt to explain the phenomena by other theories. Opium habitués frequently commit crimes perhaps without adequate motive. The effect of opium upon the higher brain centers is to impair the distinction between right and wrong. Associated with this is a derangement of the sense perceptions, by which the reason is still further impaired. Opium takers are incapacitated for executing bills or making contracts, and often do not comprehend the ordinary domestic and social relations. The writer is of the opinion that in these cases there is a degree of insanity and legal irresponsibility which should have recognition.—*Med.*

BOOK REVIEWS.

A Practical Treatise on Diseases of the Skin. For the Use of Students and Practitioners. By JAMES NEVINS HYDE, A.M., M.D., and FRANK HUGH MONTGOMERY, M.D. Sixth and Revised Edition. 8vo., pp. 832. Illustrated with 107 Engravings and 27 Plates in Colors and Monochrome. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, cloth, $4.50 net; leather, $5.50 net; half morocco, $6.00 net.

This is beyond doubt the most successful work on skin diseases which has been published of late years. In addition, we may add that it has owed its great success to its intrinsic merits. Hyde on the Skin made its first appearance in 1883. The second was issued in 1888, the third in 1893, the fourth in 1897, the fifth toward the close of 1899, and the sixth early in 1901. This is certainly an unprecedented record for a work devoted to the consideration of skin diseases. Yet the book before us is fully deserving of the sales which it has met. Each successive edition has been a marked improvement upon its predecessor, and the collaboration of Dr. Montgomery has made itself felt and is quite evident. We are more than pleased with the appearance presented by this sixth edition of a work which is now looked upon as the American authority.

Dr. Hyde still clings to the classification of the American Dermatological Association, and we quite agree with him that it is a good clinical one, devoid of complications and more easily understood by non-specialists than many of those which have been elaborated in Europe of late years. In fact, it is the only working classification which is satisfactory to the learner or beginner, and shows us what deep insight Hyde possesses in regard to the needs of the students. So far as the text of the book before us is concerned, it is clear, incisive, and demonstrative. Any one reading it attentively and possessing any sort of memory, aided by clinical examples, will be easily enabled to formulate a diagnosis of at least the more common skin diseases; and having done this much, their treatment becomes a comparatively easy matter.

As might be expected the subject of eczema is well elaborated and the discussion on its etiology is both forcible and temperate. The morococcus of Unna as a cause of the disease is rejected. A pretty complete consideration of both the internal and external causes, as well as those inherent in the integument, is made, and the reader is presented with a thorough discussion of the entire subject. Of course, all the different varieties are well described; but this is what we find given in connection with every disease. The endeavor has been made to present as complete a work as possible under the restrictions of space, and the authors

have most admirably succeeded in this as well as in giving us a reliable and thorough work.

The authors inform us that among the subjects which have been wholly or in part rewritten are: Anatomy, General Diagnosis, Herpes Simplex, Herpes Zoster, Acne, Psoriasis, Scleroderma, Tuberculosis, Blastomycosis, and Carates. The last two are comparatively new, but much work has already been done in their elucidation by competent investigators. There is no doubt, in our mind, that the investigations on blastomycosis will eventually lead to a positive solution of the question of the parasitic nature of cancer. We could take up the work before us, chapter by chapter, and find in each one much of use and interest. It is a work deserving of a place among the most frequently consulted in every physician's library. The authors of this treatise certainly deserve the thanks of the medical profession for having produced such a valuable work. The publishers have certainly done their part well, and the press-work as well as plates and engravings are in accordance with the high-class character the book is destined to enjoy wherever dermatalogy is studied or practiced. We have none but words of praise for this book. O-D.

A Treatise on Orthopedic Surgery. By ROYAL WHITMAN, M.D. 8vo., pp. 650. Illustrated with Four Hundred and Forty-Seven Engravings. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, $5.50 net.

Whilst the book before us is primarily intended for students and practioners, it is withal so well written, is excellently illustrated, and enriched with such valuable statistics that we can not but predict that every orthopedic surgeon will avail himself of the opportunity of possessing a copy of it. It is written in a manner which is especially demonstrative, and nearly all the illustrations are made from patients in the author's large hospital practice. Directly we saw the book we were favorably impressd by it as well as by the method the author has employed in developing his subject. It is one which is rational and at the same time instructive, without being in the least degree wearisome. He has very happily succeeded in combining the *utile cum dulce*. A short reference to his method of writing may demonstrate this more clearly. Thus in Chapter XV. he speaks of genu valgum, gives a description, describes and illustrates the various attitudes, speaks of secondary deformities, gives the gait, speaks of unilateral deformity, and then considers the pathology of the condition. He next takes up treatment, expectant, mechanical, and operative. Throughout all the text there is furnished a large number of illustrations, which form an invaluable aid to a proper understanding of the text, which is itself written in a clear, direct manner.

Two chapters are devoted to a subject not always considered in

works of this nature in separate chapters. They are diseases of the nervous system, as manifested in deformities or abnormalties of the joints and muscles. An example of this is seen in "hysterical" hip. These chapters are more than ordinarily interesting to the general practitioner, who, by an early recognition of the condition present, is enabled to do much good and prevent more serious after-effects. We will not attempt to take up each chapter seriatim but will content ourselves in referring to the last four chapters, which furnish a good indication of the thoroughness with which the book before us is written. Thus, Chapters XX and XXI are devoted to the disabilities and deformities of the foot including the hollow foot, plantar neuralgia, erythromelalgia, pigeon toe, hammer toe, and other deformities of this sort. Of course, shoes are discussed and there is given a demonstration of the proper shoe. In chapters XXII and XXIII we are given the deformities of the foot only, and this includes some of the most important conditions which come to the observation of the orthopedist. The various forms of talipes are here figured and discussed in such manner as to present proper ideas to him who is not thoroughly familiar with the subject.

The publishers have made a handsome volume of this treatise, and the illustrations and skiagrams are printed in an unusually clear manner. This is a book that will sell rapidly.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, Other than Drug-Giving, Useful in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Vol. II. Electrotherapy. By GEORGE W. JACOBY, M.D. In Two Books. Book II., Diagnosis; Treatment. 8vo., pp. 323. Illustrated. [Philadelphia: P. Blakiston's Son & Co., 1901. Price, eleven volumes, $22.00 net.

The present volume of this encyclopedic work is one which is elaborate without being prolix. The subject matter is treated of in a thorough manner, and yet it is sufficiently condensed not to be tiresome and elaborated enough not to be obscure. Electrotherapy is treated in a thorough and masterly manner by Dr. George W. Jacoby. In fact this constitutes the major part of the volume. Beginning with Electrophysiology and Electropathology, including injuries done by the electric current, the author then proceeds to discuss Electrodiagnosis and Electroprognosis. The former includes a very thorough setting forth of motor points, very fully illustrated, as well as cutaneous areas and their sensibility. The diagrammatic illustrations which are given are much above the average.

The next part in the book deals with electrotherapeutics proper, the first section being devoted to general electrotherapeutics and the second to special electrotherapeutics. In the former are given the theoretic basis of electrotherapy, general methods,

and effects and methods of application of the various forms of current. In the latter are given electric treatment in diseases of the motor nerves and muscles, of muscles and joints, of sensory nerves, of the central nervous system, of the general nervous system without known anatomic basis, and of the thoracic and abdominal organs.

This disposes of electrotherapy so far as general principles and diseases are concerned. The Addenda, which occupy one hundred pages, are devoted to a consideration of electrolysis, cataphoresis, and X-ray therapy, by Dr. George W. Jacoby. Much information is to be gained from this exposition of the subject. Then follow a number of short but well-written articles on the special applications of electricity. The Surgical Uses of Electricity is contributed by Dr. J. Chalmers Da Costa; that on Electricity in Diseases of the Eye is by Dr. Edward Jackson; and the Application of Electricity in Diseases of the Nose, Throat and Ear is a thoroughly well-written article by Dr. William Scheppegrell. Electricity in Gynecology, by Dr. Franklin H. Martin, deals with the subject in a clear and unbiased manner; and the concluding article on the Electric Therapeutics of the Skin, by Dr. A. H. Ohmann-Dumesnil, is particularly clear and explicit.

If the succeeding volumes of this System are equally as good as the two which have appeared, and everything indicates that they will be, the eleven volumes will constitute in themselves an invaluable reference library for every rational physician to consult. The possession of the series will not only prove a great aid to the physician, but will do much to save the constitutions of patients from the evils of excessive and meddlesome medication.

Clinical Pathology of the Blood. A Treatise on the General Principles and Special Applications of Hematology. By JAMES EWING, A.M., M.D. 8 vols., pp. 432. Illustrated with Thirty Engravings, and Fourteen Colored Plates drawn by the author. [Philadelphia and New York: Lea Brothers & Co. 1901. Price $3.50 net.]

Now that efforts are being made to establish scientific diagnosis upon a firm footing a work of the nature of the one before us is very timely, more especially as it is one in which a great deal of attention is paid to technique. The author is Professor of Pathology in Cornell University, and he is prominent among those who have shed lustre upon the University of Ithaca. This book is one in which the principles of hematology are clearly set forth and sufficient technics of chemistry and general pathology given to make it invaluable to the student. We have much admired the method employed by the author, who appreciates the difficulties which beset the path of him who undertakes to make microscopic examinations of the blood. Very specific directions are given as to the manner of making specific stains and yet the

reader is advised to buy them directly from the dealers, as these are properly made and not apt to prove disappointing at the critical moment.

The book before us is thorough, authoritative and includes all the latest advances made in hematology. Up to the present time it has been necessary to consult articles in periodical literature, an inconvenience which is now obviated by Dr. Ewing's work. The immense labor which this has involved may be judged by consulting the complete bibliography which closes each chapter. It is not only extensive but most thorough, and the student who desires to consult any monograph at greater length is here furnished the indications by which he may provide himself with the literature which he desires or which he may consider necessary in the prosecution of any special investigation.

A particularly valuable portion of the book is that in which are described the changes in the blood, which are indicative of pathological changes in the viscera, changes which are themselves due to or secondary to changes in the blood itself. It is a thorough consideration of these conditions, which makes examinations of the blood valuable as indications not only to the pathological processes which are present, but as valuable aids in the selection of a radical, rational, and efficient treatment. In order to facilitate the work of the student a number of original colored plates, made by the author, has been added. These plates delineate both normal and pathological blood, and their close study will help the student over many a difficulty.

As we stated at the opening of this notice, the book before us is the pioneer in the way of furnishing a thorough and reliable guide on the subject of the examination of the blood, and it is certainly destined to meet with a large success in the way of a ready sale to all those in the land interested in hemology. We are glad that it has appeared, as it will furnish an incentive to general practitioners to avail themselves of a help that cannot but prove of the greatest assistance to them. The book is a good one and it fills a long-felt want.

A Manual of Diseases of the Nose and Throat. By CORNELIUS GODFREY COAKLEY, A.M., M.D. Second Edition, Revised and Enlarged. 12mo., pp. 566. Illustrated with 103 Engravings and 4 Colored Plates. [New York and Philadelphia: Lea Bros. & Co. 1901. Price, $2.75 net.

This manual is one which has met with good success, and in its present form it bids fair to continue to be held in the good estimation which it has earned for itself. Designed primarily for the use of students, it has recommended itself to the favorable consideration of general practitioners, and those who do not possess it will find it quite helpful in their daily practice, as well as full of useful, practical hints for the successful treatment of diseases of the nose and throat. This is not a work designed for

the use of rhinologists or laryngologists, but rather one whose purpose it is to act as a guide to the student and practitioner as a preliminary guide to the successful study and practice of these branches, or to indicate to the latter what diseases they may cope with successfully, and which ones they should refer to those whose knowledge of them is more thorough and who are more competent to deal with them.

In its present form this book is an improvement upon the first edition. This is the more creditable to the author, as the early exhaustion of the first edition afforded him but a short time for the thorough revision it underwent at his hands. A new chapter has been added, and this will prove of the greatest use to the general practitioner. It is on the Affections of the Upper Respiratory Tract in the Infectious Diseases. This is a more than ordinarily important and useful one, as it will enable the physician to confirm a doubtful diagnosis in many instances, and in others to be prepared for an eruption which has not yet shown itself upon the skin. The upper respiratory tract will frequently give evidence of an infectious disease before the skin does.

As in the former edition, special attention has been devoted to those parts of the subject which are the more practical. Pathology has not been unduly dwelt upon, nor has bacteriology made other portions subservient to it. Attention has been principally directed to the subjects of Examination, Diagnosis, and Treatment, and it is this very management of the subject which has made this manual so popular with the medical profession.

The book is a good one, and practical, such as will find favor with every general practitioner. The publishers have given it a handsome dress, and the addition of several illustrations and two additional colored plates will no doubt insure the demand for this edition.

Municipal Sanitation in the United States. By CHARLES V. CHAPIN, M.D. Large 8vo., pp. 970. Illustrated. [Providence, R. I.: The Providence Press, Snow & Farnham. 1901.

This is not a work upon sanitation or sanitary hygiene, as some might be led to infer from its title. It is rather an account of the sanitary work done by local governments of towns, villages, cities, townships and counties. That done by States and the Federal government is not considered. The work is one of monumental labor, and is a credit to the industry of its author, whose primary object was to formulate an account for his own guidance. He does not obtrude any comments or recommendations, but makes a statement of many valuable facts.

At the end of each chapter he gives a bibliography of the laws and ordinances which are germane to the subject of which he has treated. This in itself is a most valuable feature of the book; and whilst it may be objected that some of the minor acts have

been modified in some few places since the work was in manuscript, it is really no objection, for three months have not elapsed since then. The book is a most valuable one for the use of health officers and sanitary inspectors, and an added value is given it by the numerous illustrations which are given in the text.

Numerous appendices occur at the close, and these consist of official blank forms employed in different cities of the Union. They form a valuable collection, from which ideas may be gleaned for the purpose of making improved blanks. The entire work is written in a very systematic manner, and thoroughly indexed so far as subjects are concerned. Localities have not been indexed, as the author did not wish to make the book bulky.

We can heartily recommend this book to sanitarians, and we would earnestly advise every health commissioner and sanitary officer to obtain a copy, as he will then be possessed of a veritable mine of information.

How to Cook for the Sick and Convalescent. Arranged for the Physician, Trained Nurse, and Home Use. By HELENA V. SACHSE. 12mo., pp. 239. [Philadelphia: J. B. Lippincott Co. 1901.

This little book will make many a reader of it almost wish that he were a convalescent, so many are the dainty and appetizing dishes which it suggests. It is in reality a cook book for the sick and convalescent, and, as every physician knows, it is good and appetizing food that constitutes the physician's sheet anchor in many cases. Chemical foods, predigested foods, *et id omne genus*, are invaluable in their way, but patients occasionally clamor for "something real" to eat. This is just what this book suggests and tells about in a way that will prove useful. Whilst the author is a graduate of the Philadelphia Cooking School, she has taken advantage of the experience of educated physicians, and by this means has produced a work on dietetics of a superior order.

Infant foods are given, and, like all the other recipes, they are most excellent. The mere reading of the various dishes and their methods of preparation is sufficient to awaken an appetite in a chronic dyspeptic. Doctors, nurses, and families should all possess a copy of it.

Favorite Prescriptions of Distinguished Practitioners. With Notes on Treatment. Edited by B. W. PALMER, A.M., M.D. Seventh Edition. 8vo., pp. 248. [New York: E. B. Treat & Co., 241-243 West 23d St. 1901. Price, $2.00.

The popularity of the book before us is attested by the fact that it is the seventh edition which has been issued, after the exhaustion of six large editions. It is a most judicious compilation and cannot but be popular with those who have a leaning towards formularies. Much care and judgment has been exercised in the

selection of the prescriptions which are presented in this volume, and not the least valuable portion is that included in the notes on treatment, which are furnished by the editor. From its appearance in its present revised form, we can safely predict that this last edition will meet with as ready and rapid a sale as the previous ones.

The publishers have made a neat and serviceable volume of this book, making it one of the volumes of their "Medical Classics."

LITERARY NOTES.

Books Received.—The following books have been received during the past month, and are reviewed in the present number of the JOURNAL:

A Practical Treatise on Diseases of the Skin. For the Use of Students and Practitioners. By James Nevins Hyde, A.M., M.D., and Frank Hugh Montgomery, M.D. Sixth and Revised Edition. 8 vo., pp. 832. Illustrated with One Hundred and Seven Engravings and Twenty-seven Plates in Colors and Monochrome. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, cloth, $4.50 net; leather, $5.50 net; half morocco, $6.00 net.

A Treatise on Orthopedic Surgery. By Royal Whitman, M.D., 8 vo., pp. 650. Illustrated with Four Hundred and Fifty-seven Engravings. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, $5.50 net.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, Other Than Drug-Giving, Useful in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M., M.D. Vol. II. Electrotherapy by George W. Jacoby, M.D. In Two Books. Book II, Diagnosis; Treatment. 8 vo., pp. 323. Illustrated. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, eleven volumes, $22 net.

Clinical Pathology of the Blood. A Treatise on the General Principles and Special Application of Hematology. By James Ewing, A.M., M.D. 8 vo., pp. 432. Illustrated with Thirty Engravings, and Fourteen Colored Plates drawn by the author. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, $3.50 net.

Municipal Sanitation in the United States. By Charles V. Chapin, M.D. Large 8 vo., pp. 970. Illustrated. [Providence, R. I. The Providence Press. Snow & Farnham. 1901.

A Manual of Diseases of the Nose and Throat. By Cornelius Godfrey Coakley, A.M., M.D. Second Edition. Revised and Enlarged. 12mo., pp. 566. Illustrated with 103 Engravings

and Four Colored Plates. [New York and Philadelphia: Lea Brothers & Co. 1901. Price, $2.75 net.

How to Cook for the Sick and Convalescent. Arranged for the Physician, Trained Nurse, and Home Use. By Helena V. Sachse. 12mo., pp. 239. [Philadelphia: J. B. Lippincott Co. 1901.

Favorite Prescriptions of Distinguished Practitioners. With Notes on Treatment. Edited by B. W. Palmer, A.M., M.D. Seventh Edition. 8vo., pp. 248. [New York: E. B. Treat & Company, 241-243 West 23d St. 1901. Price, $2.00.

Traitement de la Coxalgie par la mechanothérapie, sans immobilization au lit (The treatment of Coxalgia without Immobilization in Bed) is an 8vo., monograph of 32 pages by Dr. Paul Archambaud, the superintendent of the Ecole française d'Orthopédie et Massage. The author describes a new method of treatment for coxalgia which consists in immobilizing the patients in a general sustaining apparatus which permits of walking.

This apparatus, having no joints at the hip nor at the knee of the affected side, prevents irritation of the articular surfaces by friction. At the same time it permits the pelvis of the patient to be placed in a position as near as possible to the normal.

General massage, more particularly directed to the muscles of the affected limb, prevents their atrophy up to the time that the apparatus is abandoned. Care is taken, during the entire treatment, not to masser or move the coxo-femoral articulation. The author publishes an account of 71 cases treated in this manner, and of this number but one died of meningitis which could not be ascribed to the treatment. This interesting monograph may be obtained from the office of the *Revue Médicale*, 21 rue Cujas, Paris, the price being 2 francs.

The Delineator, of which we have received the July issue, is essentially a fashion journal appearing every month. In the latest issue there appears a number of colored plates of buildings of the Pan-American Exposition, now being held at Buffalo, N. Y., and these colored pictures are most artistic in execution. Having been made from the original colored sketches, they are true in reproduction and they possess added interest from the fact that they were done at high speed. This is indeed a triumph in the pictorial art.

MELANGE.

The New Era in Medical Education.—The last quarter of the Nineteenth Century witnessed the conversion of the teaching and practice of medicine from a theoretical to a practical and demonstrative science. This momentous change, than which

nothing more revolutionary and beneficient has been achieved in the history of the intellectual development of the race, has been the result of the establishment of laboratories in which research in medical science might be conducted. Such laboratories, first established in Germany, then in France and now in all civilized and enlightened countries, have added a great wealth of facts to our knowledge of the structure and functions of the body, as well as having provided methods of preventing and combating disease that already have robbed many of the most direful of their chief terrors. Hitherto America has scarcely kept pace with foreign countries in the provision for scientific studies in medicine and in incentives to their prosecution. While this aspect of medical education has not been wholly disregarded in this country, the limitations placed upon institutions of learning by their inability to provide adequately out of their means for the support of laboratories, has had a detrimental effect upon the growth of American medicine. In other countries the national and municipal governments have done readily what in this country is left to private inclination and benefaction.

In view of these contingencies the decision of the Trustees of the University of Pennsylvania to proceed immediately with the erection of a new medical laboratory, which in completeness and equipment shall be without a rival in this or other countries, is more praiseworthy and important. Intended, as it is, to provide for the teaching of students and the carrying on of research in the subjects of physiology, pathology and pharmacodynamics, in which departments of medicine the greatest advances have been made in the past and may be predicted for the future, this event is one of national and not merely of local interest. When it is recalled how definite now is much of the knowledge of the laws of health, and to what extent the discovery of the uses and functions of the various organs, the precise nature of their possible lesions and derangements, and the definite action of remedial agents, has undoubtedly contributed to the relief of suffering and the prolongation of life, and how, in a few years, we have been taught that harmful micro-organisms—the so-called germs—are the causes of many diseases, and by what means their ravages may be combatted, the most enthusiastic forecasts for future discoveries in medicine may well fall short of the actual achievements. Hence it is that the undertaking of the University of Pennsylvania has set for itself is one that must commend itself to all educators, to all students, and to all who have at heart the material advancement of the human race.

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ORIGINAL COMMUNICATIONS.

A CASE OF KERATOSIS PALMARIS ET PLANTARIS.

BY A. H. OHMANN-DUMESNIL, ST. LOUIS.

The various conditions associated with the horny layer of the skin all possess a certain amount of interest, which is increased when we take into consideration their pathogenesis. It matters but very little what the various theories are which have been advanced to account for this anomalous condition. Suffice it to say that pathological investigation has thrown but very little light on the subject, as the histopathology of widely different conditions, as viewed from a clinical standpoint, are singularly alike and their salient points are almost identical under the microscope. In view of this state of affairs much interest attaches to a proper understanding and establishing of the cause or causes which lead to the formation of this unusual dermatosis of so salient a character.

The case of which I desire to present a record is perhaps not quite as interesting at a first glance as a consideration of a few points connected with it will probably make it appear.

CASE.—The subject was a young man of about 18 who had always been healthy. When an infant he had measles, and scarlatina; as a boy, he suffered from an attack of mumps. He is well built, muscular, and a steady worker on the farm. He is a blonde and has but one trouble that can be found. He is midly neurotic in temperament. His spirits are easily depressed and he is not inclined to go much in the company of those of his own age. On the other hand, he is not inclined to brood,

but is rather shy and does not possess that confidence in himself which is usually observed in young men of his age. No bad habits are to be elicited or detected and he is temperate in every respect.

He was prompted to seek medical aid by the fact that he observed in himself an increasing inability to do his work properly. Walking became extremely painful and he could no longer grasp objects with the same firmness as he formerly could. It was then that I was asked to examine the case, and found the following

FIG. 6.—Keratosis Palmaris.

local condition present: No other portion of the skin was affected but that of the palmar and plantar surfaces. The right hand had a comparatively slight mass of horny tissue in the web of the thumb encroaching on the palm. On the palmar surface of the two distal phalanges of the middle finger was a more marked accentuation of the same trouble. On the left hand we see the condition in a most marked manner. There is a mass, about two inches long, three-quarters of an inch wide and quite thick, beginning right above the flexure of the wrist and slightly inclined to the left, resting on the metacarpal pad of muscles. The ring finger has the palmar surface of all the phalanges involved, and this rather long ribbon of hyperkeratosis is split

across at the flexure of each joint. At the junction of the middle and ring finger an almost circular patch of keratosic tissue, about a half inch in diameter, may be found. A similar patch exists also at the junction of the fore and middle finger. At the lower third of the palmar surface of the distal phalanx of the thumb a small cavity exists where a small mass of horny tissue was torn out. On the fore finger and middle finger are to be seen a few very small horny masses. A clearer idea of the condition of both hands may be gained from Fig. 6.

The plantar surfaces present much more marked symptoms,

FIG. 7.—Keratosis Plantaris.

this being probably due to the fact that the feet are incased in shoes which, in this instance, were not very flexible. As in the case of the hands, it is the right foot which is the least affected and the left the more severely so and complained of most. Upon the right foot there is a mass about three inches long, starting from a little back of the web between the second and middle toe and extending backwards. It is about three-fourths of an inch in width and quite thick and fissured. It was extremely painful on pressure. On the plantar surfaces of the distal phalanges of the big toe and middle toe is to be observed the same condition not as accentuated, and more distinct at the outer margins of these toes. Upon the left sole a much different condition pre-

vails. The hyperkeratosis is more marked and developed than anywhere else on the patient. The left heel presents a mass of horny tissue which is thick and rough. It rises from a horse-shoe shaped mass at the heel in three branches, which extend to the middle of the sole and, in the case of one, progressively grow narrower. Very thick but rather circumscribed masses of horny tissue occur at the part corresponding to the inner side of the meta-tarso-phalangeal junction of the big toe and at the corresponding joint of the fourth and little toes. Here the elevation of the masses is marked and in the large one there are several fissures. The plantar surface of the distal phalanx of the fourth toe shows marked hyperkeratosis, and the outer edge of the plantar surface of the big toe also exhibits an almost horn-like mass of keratosic tissue. A better idea of the appearance presented by the soles may be gained from Fig. 7.

Such in brief is a description of the case; whilst not a rarity, it is sufficiently interesting to merit a few words of comment upon its general characteristics as well as upon the possible causation of the condition. It must be remembered, although not stated above, that this condition was not of long duration—six months, perhaps. The patient paid but little attention to it at first, looking upon it as being a callous, and it was not until he suffered a marked degree of pain that he applied for relief. Tylosis certainly differs morphologically to quite a degree from this condition and it is distinctly of mechanical origin. In tylosis of the palms and soles the pain is intense, but there intervenes ulceration of the underlying tissues and loss of the phalanges, at times. In keratosis, on the other hand, masses of horny material are torn away or fall away and small depressions are left to mark the locality where the condition formerly existed. This is certainly a marked difference between the conditions, but not more marked than the causation. And it is this subject that I desire to briefly discuss so far as keratosis palmaris et plantaris is concerned. I do not purpose burdening the reader with a mass of quotations from literature, but rather with a few remarks in support of the thesis I desire to formulate. We certainly cannot assert the opinion of some that the trouble is hereditary, more especially in view of the fact that there exist undoubted cases in which it has been demonstrated that a certain cause lay at the bottom of the disease, and treatment directed against that cause led to marked amelioration and in some cases cure. The plea of

hereditary disease is one which can no longer be held forth at this day, and it has been very properly relegated to the traditions

FIG. 8.—Cornu Ungale.

of the past. The list of hereditary diseases has been properly made smaller and smaller, and well directed and rational investigation has revealed the true cause and helped to place medicine

upon a much more rational basis and caused it to advance very near to the line of science.

Some years ago I advanced the proposition that these horny masses in the palms and on the soles were of neurotic origin. The case reported presented the palmar lesions which are shown in Fig. 8. To quote from the paper: "Even in the horny growths of the soles of the feet, although there is subjective friction and irritation, and all those causes which would naturally

FIG. 9.—Lamellar and Nodular Hyperkeratosis of Palms.

predispose to ulceration, we find that there is merely pain, and that there is no evidence of any irritation of an inflammatory nature; in fact it is a question in my mind whether a great deal of this pain is not purely neurotic in character, for distribution of the hypertrophy of the palms and soles is very suggestive of a neurotic element for its origin; and we know that there are cases of horny growths, of papillomata of a warty nature in which a distinct neurotic element can be traced as an etiological factor. In addition to this, it has been observed that the prolonged administration of arsenic is sometimes the cause of horny growths in the hands. Keratosis of the hands due to the prolonged administration of arsenic is not a rare occurrence."*

*Cornu Unguale. International Clinics, Vol. IV., Second Series.

It is to this last sentence that I desire to call particular attention, as I have been fortunate enough to find strong confirmatory evidence. But, before speaking of this, the resemblance of the keratosic lesions depicted in Fig. 8 to those in Fig. 6 will be found sufficiently marked to attract more than passing attention. In neither of the cases had arsenic been taken. Now to take up another case which is figured in a recent publication,* we find in

FIG. 10.—Hyperkeratosis of Feet.

a paper on "The Action of Arsenic on the Skin as Observed in the Recent Epidemic of Arsenical Beer Poisoning," by H. G. Brooke and Leslie Roberts, two illustrations, figures 9 and 10, which are very similar to those of my case, even corresponding. There can be no doubt whatever that arsenic caused the hyperkeratosis in this case as well as in other cases mentioned by these authors, but this is merely clinical evidence, which, while possessing a certain amount of value and interest, is still unsatisfactory. It is the pathogenesis of the disease which we seek, and that certainly is yet but in its developmental stage and not firmly

*British Journal of Dermatology, April, 1901.

established. The oxydation hypothesis of Professor Binz is perhaps the best to explain the peculiar changes in the skin in cases of arsenical poisoning. The increased amount of oxygen in the blood stimulates the cells to the point of exhaustion. The cells do not proceed to their full development, and, as a result, we have the heaping up of cells which are nearly amorphous.

Now, applying this same idea, mutatis mutandis, to those cases in which no arsenic has been taken, we find that the nervous system, more particularly that portion of the sympathetic regarded as the so-called trophic nerves, by reason of some neurotic change or "storm," will exercise its power on the cells and cause more or less marked stimulation, and this being continued a certain length of time would lead to the exhaustion of these cells. If this hypothesis is tenable it would certainly be an interesting investigation to see if the neurotic condition did not produce a certain decrease in the amount of oxygen in the blood and thus reproduce the condition induced by arsenic.

There are many more interesting points connected with the histopathology, chemistry and pathogeny of the subject, which will have to be studied and investigated with care. The question why the papillæ are unaltered in some parts and show marked change in others is also deserving of research. Again, why should certain portions of the palms and soles be affected and others escape (as shown in the figures), is a question which must certainly be susceptible of some rational explanation. These are but a few of the questions to which a merely superficial consideration of the subject of keratosis palmaris et plantaris gives rise. A further examination will reveal more, which are certainly rather of a general pathological interest than purely special questions. Future investigators will no doubt give rational explanations and demonstrations in lieu of the hypothesis which at present is advanced for want of something better.

To conclude, it may not be amiss to state that the case reported was entirely rid of the keratosis by the application locally of a strong salicylic acid ointment (℥ss. to ℥j.), coupled with the administration of gr. $^1/_{20}$ arsenious acid in the form of an Asiatic pill thrice daily, after each meal. The peculiarity of the condition is that it is produced by toxic doses of the remedy so instrumental in relieving it.

SOME OF THE DIFFICULTIES OF GETTING EUROPE TO ADOPT INTERNATIONAL LEPER LAW.

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

I notice that Germany has induced Russia and Roumania to join with her in the decision that for the future no passports be issued to lepers, and have formed an international agreement to that effect.

This is what I have fought for since 1895 and what Hansen so strenuously (and in the Berlin Conference successfully) opposed. The international leper law then was voted down, and Hansen's Norwegian law was substituted for adoption. Hansen claimed that it was not necessary to isolate all lepers and pointed with pride to his country's experience with the disease under this imperfect law. He took good care not to tell the world assembled at Berlin that it was in reality by shipping his lepers and the children and grandchildren of lepers to the United States that he had accomplished the purification of his country.

The leprological world at last is waking to the fact that he is not the teacher of leprosy that he so fondly boasts of being. "Norway," says he in his letters to me, "has nothing to learn of the rest of the world in leprosy. Only as teachers (of leprosy) are we interested in what concerns other nations. If I go to Berlin it will be only to tell other countries what to do with their lepers, not to hear them speak. We have nothing to learn of other countries. When we tell them what to do and how to do it we have done our duty, and if they do not do as we tell them to do it is their own matter, with which we have no concern. They are then stupid people, and stupid people should not be helped," etc., etc., *ad nauseam*.

Even the medical press of Berlin opposed me. Here are some letters to show the difficulties that were put in my way:

Dr. Poladowsky, October 24, 1898, wrote me (translated from the German):

Your valued letter of the 5th of this month and the pamphlet (*Medico-Legal Journal*, June, 1898, article, "International Leper Law and Norwegian Leper Law") I have received in due time, and I am making all possible endeavors to satisfy your wish and to publish here your article about Norway and international lepra legislation. But in its entirety—that is, a simple

translation—no medical periodical will publish it here; and I must be glad if I can insert somewhere a notice. I am also afraid that the whole clique around Virchow and Lassar will adopt an inimical attitude toward you.

Nov. 21, 1898.

The MS. which came to me to-day I have at once sent to Prof. Lassar (an article, "International Leper Legislation," a copy of which was first sent to Dr. Dyer, of New Orleans, which he did *not* publish in the *New Orleans Medical and Surgical Journal.* It was afterwards published in the *London Lancet.*). If he should decline it I shall try my luck with another periodical. But I must remark that I can have only with great difficulty any relations with medical journals, and that only the German *Medical Wochenschrift* of this city declares itself ready to publish from time to time small articles of me on the progress of leprosy in America. My notice as to your article, "International Leper Law and Norwegian Leper Law," has been accepted; as I have already said, it will soon appear. I have read proof-sheets a week ago.

Dec. 5, 1898.

Your valued letter of Dec. 2d I have duly received, and thank you most heartily. I shall continue doing for you everything I can. With the leper question I am not likely to occupy myself much further, only I shall interest myself in the spreading of the disease in South and Middle America. Your MS. I sent, as I have already mentioned, first to Lassar; he answered at once (22d Nov., 1898). The *Dermatological Zeitschrift* has allegedly no use for the MS. He says further in his letter; I quote literally: "But I ask you not to communicate anything of that to the author, because I wish to avoid all personal 'disagreeables.'" Professor Lassar seems to be afraid of you and your sharp pen. * * * I offered then your MS. to Dr. Max Joseph (*Dermatologische Centralblatt*). He declines to print it, as a complete *referat* has already been printed. I wrote now to Dr. Scheube (Greiz), one of the editors of *Janus*, and he told me a few days ago that he had sent the MS. to the *Redacteur* in Amsterdam; that also he had recommended its acceptance. We must then keep our souls in patience," etc.

LETTER FROM JANUS.

Dec. 17, 1898.

DEAR DR. POLAKOWSKY:

From Doctor and Councilor of Sanitation, Dr. Scheube, we received an article of Dr. Ashmead, to be published in *Janus*.

To our great regret, we have a lack of space. Will you have the kindness to tell us how you wish to dispose of the paper in question. With our regards, DR. PEYPERS.

LETTER FROM THE "DEUTSCHE MEDICINISCHE WOCHENSCHRIFT" TO DR. PALAKOWSKY.

Jan. 1, 1899.

Your contribution in No. 42 about Ashmead's composition has brought forth a sharp answer from Hansen. As Ashmead's proposals (for international leper laws against emigration of lepers from contaminated to sound countries) are declared to be without sense; under these circumstances we will abolish further leper discussion. REDACTEUR.

LETTER OF DR. ASHMEAD TO DR. TAKAKE OF JAPAN.

Feb. 12, 1899.

I enclose you the MS. of my argument against Hansen. Will you bring it in the proper way before the Government and the profession of Japan, and act with those of us who stand for international leper law? Among these the principal names are: Lima and Havelburg of Brazil; President Smith (of Board of Health) and Drs. Mowritz and Alvarez of Hawaii; Kerr of Canton, China; Munro of London; Besnier and Jeanselme of Paris; Unna and Arning of Hamburg, Germany; Max Joseph and A. Blaschko of Berlin; Prof. Isedore Neumann of Vienna; Drs. Petersen and Dehio of Russia, etc. (I have many other names but that will do.) We are preparing to down the Scandinavians in Paris in 1900 (or some other place or time).

LETTER OF DR. ASHMEAD TO DR. ROGER, CALCUTTA, INDIA.

I have your postal of the 25th of November, and I have sent you a circular which will explain to you what our project of Congress means. I should like to get from the leprologists of India their views as to the compulsory isolation and its practicability in India. It seems that some people in London are opposed to compulsory isolation. I should like to know what arguments they have against it; or, if they have no arguments, what cause

impels them to oppose a thing which, as even the history of the Middle Ages shows, can eradicate the disease.

I suppose there are still people who *dumbly*, without knowing why, look at the bacillus as the element from which a remedy and cure may be expected. That same bacillus has done nothing for us in twenty-five years.

Please tell me what you and such of the leprologists of your country as you know to be competent think of the isolation question, and also what can be the real, perhaps hidden or partially hidden, motives of those who oppose compulsory isolation; for instance, Jonathan Hutchinson, Sir James Paget, Sir Joseph Fayrer.

Your offer to help me is accepted with the deepest thankfulness. Would you make a report of the phases of the leprosy question in India, to be read at our meeting in Moscow next August? Please bear in mind that we have a large London clique to fight in order to obtain a World's Committee for the suppression and prevention of leprosy.

The following communication was given out to the American Press Association:

I give you a short resumé of the plan of the leprosy congress, and also some copies of letters, from which you may extract as much as you think fit. I have sent to the *New York Sun*, where you will probably see it, an abstract of my letter to Miss Clara Barton, president of the American Red Cross Society, and of my address to the Pope. You will probably find in the same paper some very interesting photographs of leprosy deformities. The following eminent leprologists have already expressed their willingness to join the Congress: Dr. Norman Hansen, the discoverer of the bacillus; Bouffé of Paris, who claims to have found the bacillus in human blood, and who promises to use his considerable influence to obtain an assurance of sympathy from President Faure; Prof. S. Kitasato of Japan, whose name is almost as well known as that of Hansen, and who has charge at this moment of a Japanese official investigation into leprosy ($30,000 were given to him for that investigation); Carrasquilla, a licentiate of Colombia, South America, who has recently obtained an antileprosy serum by inoculating horses, asses and goats with leper blood, and after many days reinoculating lepers with blood drawn from the animals; Alvarez of Honolulu, who is

now engaged in experimenting for the Hawaiian Board of Health, trying to obtain an antitoxin by inoculating lepers with the bacillus prodigiosus; Smith of Tracadie, the Inspector of Leprosy in Canada; Numa Rat of St. Kitts; Donovan, the superintendent of the Leper Asylum, Spanish Town, Jamaica; Azevedo Lima, the head of the Hospital dos Lazaros, Rio Janeiro, Brazil; Dr. Havelburg, the eminent bacteriologist of the same city; Jonathan Hutchinson of London, who is of opinion that leprosy was brought into Europe by the Crusaders out of the fish-eating Orient, and spread in consequence of the fish-eating necessitated by Christian fasting; Neisser of Breslau (the real discoverer of the bacillus, although he did not record it), of leprosy cell and bacillus staining fame; Blaschko of Berlin, the great syphilographer; Ehlers, "the Copenhague," the government expert of 159 lepers, who was sent on two perilous and disagreeable voyages to investigate the conditions of leprosy in Iceland, and who antagonizes the theory of Leloir of Lille, France, and Zambaco of Constantinople, in their ideas as to an autochthonous leprosy, which, they say, has appeared in Brittany and Flanders (France), and which, they claim, is a resurrection of the ancient leprosy supposed to have died out in the fifteenth century (I will say in passing that Ehlers attributes these cases in France, not to a resurrection of the ancient seed, but to a reinoculation of the fisher-folk of France by their commerce with Icelanders); Zambaco of Constantinople, who believes that syringomyelia and acuhuns of the negroes, etc., are phases of leprosy; Professors Petersen and Münch of Petersburg and Moscow; Besnier of Paris, the present president of the International Dermatological Congress; Dr. Morrow of New York, appointed as committee of the American Dermatological Association; Dr. J. G. Kerr of Canton, China, who has spent 23 years studying leprosy in China; Goldschmidt, who spent 26 years as a doctor of Portugese lepers in Madeira; Dr. Impey of Robben Island, South Africa, whose opinion is that leprosy is curable by the inoculation of erysipelas germs. I may add that I represent myself an idea, having studied pre-Columbian leprosy, and proved to the satisfaction of the Smithsonian Institute authorities that leprosy did not exist in America before Columbus.

The following governments have been appealed to to send official delegates:

United States, England, France, Germany, Denmark, Italy, Spain, Russia, Norway, Canada, Mexico, all the Republics of South America, Hawaii, China, Japan, British India, the West Indies..

Answers have been received assuring us of sympathy from Great Britain, France, Germany, Denmark, Norway, Hawaii, Japan; and Mr. Denby, the American Minister in Pekin, assures me that he will do his utmost to obtain the appointment of a delegate by the Chinese government.

The Red Cross Society has been invited to send official delegates, one for each national branch.

I stop here, because I do not want to send you too much matter, knowing that the space of a newspaper is not infinite. But you will always find me ready to give the American press any information about our affairs that it may require, especially as I hope that the American press will fight with the promoters of the Congress.

THE ASHMEAD APPEAL, 1896.

A first Congress of all the powers which on committee can call or array against leprosy will meet, we hope, next year in Moscow. I will say at once a thing, which a number of eminent leprologists have never been able to understand, that is: We do not want a multitude of learned men to come together and speak in an exceedingly interesting manner about a disease which every one of them knows to be incurable. We want to see a number of men, whether leprologists or not, possessing all the powers, in this respect, which their governments can put into their hands, in order to make laws, sure of enforcement, against the spreading of the disease and the inoculation of new countries by wandering lepers; that is, for the maintenance of perfect isolation, not isolation as it exists in private houses of Norway to-day (for Norwegian isolation is far from being complete), but real, complete isolation, in separated colonies, by decrees enforced by government. These colonies would not only prevent the spreading of the disease, but also secure for the poor victims of the disease a less wretched life than under existing laws and conditions he can expect.

I have thought that the influences through which such results can be obtained are the following: A permanent world's committee, each member of which would represent the good intentions and the power of one government; the interest of the

church which wields the most power in the leprous countries: the Catholic church in Italy, Spain, South America; the Church of England and that of Mohammed in the British Empire; the Buddhist religion in China and Japan, etc. The influence of the Geneva Red Cross to care for the victims of the scourge in non-Catholic countries. Of course the Sisters of Mercy could do an immense deal of work; and if I mention them last it is simply because the greatest number of lepers are in Mohammedan and Buddhist countries, where, I can say it for having lived and exercised my profession of a physician in such countries, their best work would be considered as an attack and an insult. The Red Cross, with its secular character, has branches already established in China and Japan. Our work is not a missionary one; it is a medical one—a simple affair of the body, not of the soul. The Japanese will leave us the bodies of their sick to take care of, but the garb of a Sister of Mercy would be resented as the uniform of an enemy, and they would think it their holy duty to save the souls of their poor lepers, even if they could do nothing for their bodies. There is as much faith among the Japanese in their own tenets as there is among us in our own.

Leprosy is contagious, at least inoculable, not hereditary; and if we take care only of one generation of lepers, and prevent inoculation of children, the disease will be eradicated. Is this not worth fighting for? Could we obtain it only by talking? Should not every government take official notice of our Congress, which can bring about such great results—results which the last century would not have dared to hope for?

In countries where even imperfect isolation has become a law, like Norway, etc., this terrible disease has given way, while in countries where isolation has not been enforced the scourge has increased terribly. In Colombia, South America, in 40 years the number of lepers has increased from 400 to 30,000. "What," says the United States Minister McKinney, "will be the situation in Colombia in 40 years to come? The thought is horrible."

The XIVth International Medical Congress is to be held in 1903 in Madrid. In our next issue we will give a list of the general officers, sections, etc.

AN OINTMENT FOR DISEASED MUCOUS SURFACES.

BY A. S. MAC DONELL, M.D., RAT. PORTAGE, ONTARIO, CANADA.

For more than fifty years now the value of the eucalyptus tree as an atmospheric purifier has been recognized and utilized throughout the civilized world. This tree was first introduced into Europe in 1856, by M. Ramel, who had observed in Australia its peculiar property in overcoming the insalubrity of unhealthy marsh lands; and now, as is well known, it is cultivated in America for its sanitary value, in large tracts of low and malarial lands in California, Brazil and other southern states. Its specific hygienic virtue has been found to be due to the free secretion of an antiseptic oil which it contains and exhales into the air, and which possesses a strikingly toxic influence over all lower forms of animal and vegetable life—especially cryptogamic and infusorial organisms.

Concerning the value of this oil, as applied in antiseptic surgery, it may be of interest to know that it was the prime favorite of the great Lister, who not only was wont to put a few drops of it into his dressings, but also had his gauze made of it as well as his ointments. While there are, of course, other germicides used in more recent times which have been shown to possess greater individual antiseptic strength, yet none of them exhibit the unique demulcent effect which renders the oil of eucalyptus so desirable as an unctuous application to diseased mucous surfaces, especially when incorporated with a sterilized petroleum base and made into some such form or consistence as vaseline. Lyptol is such an ointment, containing the pure Australian oil, and has the additional advantage of being strengthened in its antiseptic properties by such well known ingredients as mercuric bichloride, benzo-boracic acid and formalin, brought into perfect combination by the action of heat sustained at a high temperature.

Though an ointment of this character is doubtless too specific in its effects to be recommended for general public use, yet in the hands of the physician it is an agent incomparable in its therapeutic action when prescribed with ordinary care and discretion. In catarrhal inflammation of the nasal mucous membrane, attended with irritating muco-purulent secretions and turgescence of the erectile tissue—so commonly seen in cases of acute coryza,

influenza and hay fever, or in the so-called "epizoötics"—lyptol, generously applied direct to the inflamed and swollen tissues, will produce immediate soothing effects such as cannot be obtained by any other means.

The beneficial results observed in these cases would seem to be due not only to the antiseptic influence of the oil and bichloride, which destroy any germs infesting the mucosæ or secretions, but to the effectual protection afforded the inflamed surface by the presence of the ointment itself. If a powder or solution were used the remedial effect of the application would be but temporary, the inflamed surface being left constantly exposed to the air and germs, except at the moment of each treatment. With the ointment, on the other hand, the protection is permanent; the passages being cleansed of course at each subsequent dressing, the frequency of the renewal of which will depend upon the judgment of the physician. In other words, in any rational treatment of an inflamed mucous surface the same protection should be offered that is given to a denuded epidermis in cases of scalds and burns.

To apply this mode of dressing properly in acute nasal infections, the patient should be furnished with a liberal supply of the ointment (at least four ounces) and instructed to use it frequently, freely and thoroughly. By this advice is meant that a portion of lyptol, about the size of a hazel nut, should be placed on the end of a clean finger and introduced high into each nostril, every twenty or thirty minutes until relief is obtained, after which the application may be made only occasionally. Ordinarily the results are immediate and satisfactory, the case being an unusually obstinate one that resists a full day's treatment. The passages themselves are readily cleansed at each new dressing, the heat of the tissues partially liquefying the ointment, which is removed with the discharges on the handkerchief in the usual manner.

Notwithstanding the apparent crudeness of this method of treatment, the writer has found it to be simple and effective, and has recently adopted it with success in other diseased mucous surfaces—especially as a local application to excoriated vulvas and in raw vaginas. In these cases the same general plan is observed in instructing the patient to use the dressing generously, although an application made thoroughly three times a day is

usually considered sufficient. The lack of disagreeable or suggestive medicinal odor about this dressing has rendered it peculiarly acceptable to this class of patients, some of whom have continued to use it in the nature of a lubricant or genito-toilet article after the necessity for its therapeutic effects could no longer be urged as a valid excuse for its employment.

In ulcerative conditions of the genitals of venereal origin, in which foul and flabby granulations and destruction of tissue are characteristic, this ointment will be found practically a specific. The following case of this kind was recently treated by the writer, and is cited here as an illustration of its value in this connection.

M. R., a colored girl, aged 18, presented herself with a history of recent syphilitic exposure, and exhibited an initial lesion which, through neglect of cleanliness and proper treatment, had involved both labia majoræ and formed a complete circle of the vulva. The ulcerative ring was fully a quarter of an inch in width, two or three lines in depth, regular in outline, and with a well recognized indurated base which emitted the usual viscid muco-purulent discharge. The lesion had existed for more than a fortnight, and the patient had finally sought relief from the pain and discomfort.

In this case, after the parts were first thoroughly cleansed with a strong carbonized solution, about one-fourth of the affected circumference was cauterized with a pencil of nitrate of silver, and the whole generously smeared with a layer of lyptol, which was removed and reapplied by the patient three times daily for three days. On the fourth day, another quadrant of the circle was cauterized, and the dressing applied as before. This procedure was repeated at corresponding intervals on two more occasions, or until the entire lesion had been circumscribed.

The value of the ointment in this case was unquestionable. On each examination the antiseptic and stimulative effect of the preceding application was recognized, not only in the clearing up of the foul secretions, but in the rapid growth of healthy granulations which had sprung up from the base of this sore at the portion previously cauterized. At the end of the second week fully three-fourths of the diseased circumference had entirely healed, the remaining fourth (the part last cauterized) healing in like satisfactory manner during the next ensuing week.

HOME TREATMENT OF TUBERCULOSIS.*

BY LAWRENCE F. FLICK, M.D., PHILADELPHIA, PA.

By home treatment of tuberculosis I mean treatment of the disease at the place where it was contracted in contradistinction to treatment in a climate selected for its curative qualities. In the past, the teaching has been that outside of climatic treatment there was no hope for the consumptive; but fortunately this doctrine so inhibitive of progress is gradually giving way to a more encouraging one, which proclaims the curability of tuberculosis in any climate.

For the cure of tuberculosis it is necessary: First, to restore the physiological functions of the body to a normal state; second, to bring about a state of hypernutrition; and third, to establish immunity. For the accomplishment of these three results, ease and comfort of life, plenty of good food, plenty of fresh air, and military discipline in the mode of life of the patient are necessary; and they must all extend over a period of from three to five years. Every act and every element in the patient's life must be regulated with a view of conserving strength and creating new resources for the conflict against the disease.

Vastly the majority of consumptives are poor people, who prior to contracting the disease were unable to keep their health up to the normal standard. They live and have lived under bad environments, and their habits of life have been and are at variance with the laws of health. Their families, like themselves, are poor, and if any money can be raised with which to make a struggle for life, the amount is necessarily small. For such people more can be done in their homes, bad as those homes are, than away from home, because their limited means will get them more nourishing food and will get it for a longer period of time at home than away from home, and the defects in environment and mode of life can in some measure be corrected.

Home treatment of tuberculosis may be divided into what nowadays is called closed treatment and open treatment. By closed treatment is meant treatment in a sanatorium, in which the patient is shut off from the world and is subject to strict discipline. By open treatment is meant treatment at the patient's home, among his relatives and friends, with possibly some occupation and with considerable liberty.

*Read before the Philadelphia County Medical Society, Feb. 27, 1901.

Closed treatment is the ideal treatment for persons suffering from tuberculosis. One of its chief advantages is that it enables the physician to prevent in his patient the intercurrence of complications by excluding from the sanatorium all persons suffering from colds, influenza, and other diseases of the respiratory tract that may be epidemic outside. It also facilitates discipline and places the physician in closer touch with his patient than is possible with open treatment. Wherever closed treatment has been tried irrespective of climate it has given good results. At present it is yielding from 20 to 40 per cent. recoveries, according to the stage of the disease at which patients are taken. In selected cases it would give even better results. Closed treatment will undoubtedly be the treatment of tuberculosis of the future.

For the present, however, it is what may be called open treatment at home which deserves the attention of the general practitioner, because much can be accomplished by it, and it is the only treatment which is practicable at the present time for the average case. Neither public sentiment nor professional opinion will, as yet, warrant placing closed treatment on a sound financial basis.

A very important preliminary for the successful treatment of tuberculosis is early diagnosis. The general practitioner must be a little more on the alert in looking for tuberculosis than he has been in the past. He should not wait until a cold, an attack of influenza, or a pneumonia reveals to him what should have been discovered before such a complication had set in. In this connection it is well for him to bear in mind that uncomplicated tuberculosis sets up very few symptoms, and may produce none that attract attention. Indigestion is one of the earliest symptoms. The lungs and the stomach are both supplied by the pneumogastric nerve, and injury to the lungs almost invariably sets up stomach symptoms of some kind. For this reason every case of indigestion should in the mind of the physician raise the question of tuberculosis, and merits a careful investigation for its ultimate cause. A physical examination of the lungs should always be made in a person who persistently suffers from indigestion. Loss of weight is an early symptom. It usually follows in the wake of indigestion and practically always precedes the development of a cough. Unfortunately it does not always arrest attention, as few people weigh themselves systematically,

and without weighing the loss of ten or fifteen pounds is apt to go unnoticed in people of average weight. Lassitude, loss of appetite and a tendency to feel cold which does not amount to a chill, are early symptoms, but rarely will induce people to consult a physician. Cough in the incipient stage of tuberculosis seldom amounts to much until the tuberculosis becomes complicated with something else, such as a cold or an influenza. It may not occur at all until a complication sets in, and when it does occur, it is very mild and takes place only upon change of position, upon exertion, or possibly after eating or drinking. Such a cough rarely brings a patient to the physician. The detection of incipient tuberculosis is therefore difficult from the very nature of things. The family physician, however, could more frequently unearth early cases than he does, had he a clearer conception of what constitutes incipient tuberculosis, and were he more on the lookout for it. A very good plan is to have physical examinations made of all those members of a household who are known to have been exposed to tuberculosis by the presence of a case in the house, in the family, or in the place of occupation, and who are below normal in health. When there is expectoration by such a person the sputa should be examined. I have in recent years discovered incipient cases of tuberculosis in this way when I little suspected their existence.

Given a case in which there is a history of indigestion, loss of weight, a feeling of lassitude, capricious appetite, slight chilliness or creepy feelings, occasional cough, especially upon change of position, an abnormal daily range of temperature, the temperature either going a little above normal or a little below it, a disturbed circulation as manifested by an increased pulse-rate, an increase in the expiratory murmur and an impairment of resonance over a circumscribed area of the lungs, and we have a case of incipient tuberculosis of the lungs without doubt. There need be no hesitation in making a diagnosis of tuberculosis in such a case, no difference how mild the symptoms. So far as my observation goes, the general practitioner makes too light of this symptom-complex, and never thinks of associating it with tuberculosis. To him tuberculosis needs to be a savage, fatal disease, and he does not associate the name of tuberculosis with a case until the patient is on the brink of the grave.

When a case of tuberculosis has been diagnosed, the first step

in order of treatment is to fully acquaint the patient with the nature of his ailment. It is not possible to treat a person properly for tuberculosis unless he knows and fully understands what is the matter with him. The rules which it is necessary to lay down for a tuberculous patient will not be obeyed unless he knows why those rules are made. In the matter of prophylaxis, for instance, intelligent co-operation can only be given when the patient knows wherein the danger lies. Moreover, unless a patient appreciates the gravity of his ailment, he will stop treatment as soon as he feels a little better, greatly to the prejudice of his recovery. No harm ever comes from telling a patient that he has tuberculosis and explaining to him what it all means. The information may shock him a little at first, but he soon recovers from the shock and buckles on his armor to fight for his life. With the knowledge which he has gained, he becomes a good patient, whereas otherwise he would have been an indifferent one. Having been told what is the matter with him he should be assured that with modern treatment his chances of recovery are good. If the disease is not far advanced, he will note rapid improvement from the start, and he will gain courage and become an enthusiast in his own cause.

When the patient has been fully informed about the nature of his ailment, he should next be made to understand thoroughly that successful treatment means a persistent continuous struggle for a long time, possibly for a period of from three to five years. This information will benefit the patient and protect the physician. A little bit of wisdom which has come to me by experience is that a tuberculosis patient is not always cured when he appears to be cured, and that treatment should be kept up for a long time after the patient appears to be well. Since I have learned this lesson my permanent results are better than they were before.

With the patient properly instructed about the nature of his ailment and the length of time required for cure, it is next in order to lay down the routine of life. This must be very complete. Everything which the patient does, everything he eats and drinks, his home—its sanitary arrangements, his work, recreation, and rest—all must be passed in review by the physician. A good plan is to begin with the food. Inquiry should first be made into the diet which the patient has been using.

When he has told all about what he eats and drinks, then the medical adviser should tell him first what not to eat and drink, and then what to eat and drink. With many patients certain articles of diet will have to be stopped. As a general proposition, stimulants had better be stopped and also pastry of every kind. When it is found that the patient has poor digestion only one meal of solid food in every twenty-four hours should be advised. In all cases large quantities of easily digested food should be commended. From three to six quarts of milk a day and from six to twelve raw eggs a day should be insisted upon to be taken. Vegetables, fruit, and nuts should form part of the daily routine diet. Instructions should be given about the intervals at which food should be taken, the manner in which foods should be kept and prepared, and the condition in which they are most easily digested. Eggs, for instance, should not be used unless they are absolutely fresh. Milk should be carefully selected, sterilized, and kept in sterilized vessels. Unless all these minutiæ are entered into, mistakes in diet will be made by the patient which will prove disastrous to forced feeding. Even intelligent patients will not think of such details if left to their own resources. When, in spite of great care in the selection of food, forced feeding is not well borne, artificial digestive aid should be given by pepsin, pancreatin, hydrochloric acid, diastase, and such like preparations. In the majority of cases such aid is needed.

When the food question has been carefully gone over, the air question should be taken up. Abundance of fresh air night and day should be insisted on. During the day the patient should rest in the open air and at night he should sleep with his windows open. This practice should be insisted on even during cold weather. The body, of course, must be kept warm by clothing. Unless there is at all times an abundance of fresh air for the patient, forced feeding will prove unsuccessful, as oxidation is an essential stage of the metamorphosis of food into tissue. Moreover there is nothing so poisonous to a tubercular subject as rebreathed air. All these matters should be fully explained to the patient and the method by which the proper amount of fresh air can be obtained for him under his peculiar environments should be carefully gone into. Even in the humblest home in the small streets of a city a way can be found of giving the patient

plenty of outdoor air. The old bugaboo of draughts need not be taken into consideration in planning for fresh air, so long as the patient is properly protected by clothing. Sitting wrapped up in an easy chair in the yard, on the pavement, on a flat, and even on the roof are ways in which the patient may be given rest treatment in the open air. If there is no other way the patient may be seated in a room with all windows open. Whatever the method, out-of-door air without fatigue to the patient must be insisted on.

After the questions of food and air have been disposed of, the mode of life of the patient should be dealt with. If there is activity of the disease the patient should be sent to bed and kept there at absolute rest. If the disease is in the incipient stage, or if activity has been arrested, moderate exercise may be commended. When the temperature has become normal even occupation may be advised. All of these things should however be definitely determined for the patient by the physician. Nothing should be left to the judgment or impulse of the patient. A regular time should be prescribed for everything that the patient does. He should have at least eight hours' sleep and he should have it during the night. He should have rest during the day, more or less, according to his condition, and the time of taking such rest should be fixed. There should be no dissipation, no excesses, and no overexertion. As a rule tubercular patients should not indulge in amusements which require great exertion, which keep them up at night, or which necessitate presence in a crowded hall or polluted atmosphere. A single over-exertion, one act of dissipation, or a few hours in a crowded, badly ventilated hall may turn the tide of the case from recovery to fatality. Strict military discipline should be introduced into the patient's life. He should be made to understand that he can have but one object in life and that to get well. Whatever militates against this must be foresworn.

As to medication, in the treatment of tuberculosis a great deal can be accomplished by it if drugs are judiciously and intelligently used. The fundamental principle underlying drug treatment should be: whatever helps nature and builds up is good and whatever obstructs nature and breaks down is bad. No drug should be allowed to go into the patient's stomach which might disturb or interfere with digestion. No drug should be administered by any method which might cripple or obstruct the function

of any organ of the economy. Opiums, stimulants and depressants—all should be used cautiously, therefore, and only when there is a positive indication for them. When any organ in the economy is embarrassed by the disease, artificial aid should be given to that organ, indirectly if possible and directly if necessary. Every effort should be made to put the functions of the entire organism into a physiological condition. Drugs which, while helping the function of one organ, prejudice that of another, should be avoided as far as possible. Old-fashioned cough medicines should be eschewed. Antidiaphoretics had also better be avoided. It is surprising how well one can get along without these when little details in the general management of the patient are carefully looked after. For years I have practically discarded the use of opiates and antidiaphoretics in the treatment of tuberculosis, and I can truthfully say that I do not need them.

There are many drugs which empirically have been found to be useful in the treatment of tuberculosis, and in the use of which every physician should endeavor to become an adept. Foremost among these, according to my experience, are the iodine compounds. By inunction with a solution of some of the rich iodine compounds I have increased my power to deal successfully with tuberculosis fully 50 per cent. over what it was before I began to use these drugs. The iodine compounds which may be used by inunction are iodoform, europhen or isobutyl-ortho-cresol-iodide, iodol or tetraiodopyrrol, and aristol or di-thymol-iodide. All of them are soluble in olive oil and cod-liver oil, and all break down readily, thus giving off their iodine. The richest of them is iodol, which contains 89 per cent. of iodine, but unfortunately it breaks down very readily, and is apt to decompose before it can be used by the patient. After considerable trial I have discarded it for this reason and have of late years confined myself almost exclusively to the use of europhen, which in solution will hold together for some weeks. Possibly a way may be found of keeping iodol in solution. I use these iodine compounds by inunction because I thereby get an even continuous iodine effect without in any way interfering with the functions of the digestive tract. Other effective methods of using iodine may be found, and I am inclined to think that inhalation offers a field worthy of further cultivation. Of the many rich iodine compounds at our command there are deserving of careful study the iodide of sulphur,

tetra-iodophenolphtalein or nosophen, di-iodoresorcin-monosulphonate of potassium or picrol, and iodophenin.

Creosote and its various compounds and derivatives have likewise earned for themselves a permanent place in the armamentarium for the treatment of tuberculosis. For reasons of economy I use almost exclusively the pure beechwood creosote, and I have no reason to be dissatisfied with it. I give it in hot water before meals in gradually increasing doses until a maximum dose of fifty drops three times a day is reached. If the patient bears it well I continue this dose indefinitely. I do not use creosote in incipient cases and discontinue its use when all symptoms of pus-organism complications have subsided.

Among the many drugs which can be used for building-up purposes there are deserving of special notice: strychnine, arsenic, phosphorus, digitalis and iron. Strychnine should be used lavishly in incipient tuberculosis and in subacute and chronic stages of the disease. In the use of arsenic great circumspection should be exercised, so that no interference with the function of any organ may occur. Arsenic readily upsets the stomach and may disturb the action of the kidneys. It is, however, a most valuable remedy and is well worth a trial in every case. A good plan is to combine it with pepsin and tonics of various kinds. Phosphorus in its various combinations and derivatives can be used to great advantage at one time or another in almost every case of tuberculosis. Digitalis should always be thought of in connection with tuberculosis, but should only be used when there is defective heart action, and never when the heart is already straining under excessive burdens. Iron in its many combinations is a desirable remedy in all cases of tuberculosis in which there is a depraved condition of the blood. Vegetable tonics, stimulants, cholagogues, stomachics, antacids and antifermentatives or intestinal antiseptics should always be kept in mind in the management of a case of tuberculosis and be used when indicated.

Wherever and whenever a drug can be used to correct a fault or supply a defect in the function of any organ of the body it is good practice to use it. No drug should be used, however, except when there is a positive indication for it.

The special treatments of tuberculosis, such as the pneumatic cabinet, the serum, the vapor inhaling, and the hydrotherapeutic, are not applicable in home treatment. They are, moreover, too

expensive for people of limited resources. Fortunately they are not essential for cure of the disease. Under the plan of treatment just outlined cases can be cured in the humblest homes even of crowded streets in cities.

One of the greatest difficulties encountered in home treatment of tuberculosis, especially in open treatment, is the frequent intercurrence of complications, such as colds, influenza, and pneumonia. It is practically impossible for a tubercular subject, who associates promiscuously with others, to pass through the fall, winter and spring without getting one, two or three attacks either of colds, influenza or pneumonia. These attacks are exceedingly trying, and frequently are followed by a recrudescence of the tubercular process. The only precaution that can be taken against them is to instruct tubercular patients about the contagious nature of colds and influenza, and to advise them to keep away from persons who have such ailments. When a tubercular patient develops such an attack, even of a mild character, he should be put to bed the moment he shows the first symptoms. When a complication has been established vigorous treatment should be applied to it until it has been completely vanquished. Great care should be exercised not to mistake symptoms of the complication for symptoms of the tubercular process, and in consequence of such mistake to stop the treatment of the complication long before it is well. Such mistakes are easily made, and when made are apt to lead to serious consequences, because the patient will be allowed to go when he should be kept in bed. The physician must not allow himself to be discouraged by the occurrence of such complications, as he can feel pretty well assured that a few weeks' rest in bed will see his patient as well off, at least, as he was before the complication had set in. The danger of recrudescence is much less when the patient is kept in bed than when he is allowed to be up, and for this reason, it being of the greatest importance that recrudescence in the tubercular process should be prevented, absolute rest in bed should always be insisted upon until all activity of the complication has subsided.

Frequently with the complications of colds, influenza and pneumonia, or in their wake, comes a still more serious complication in the form of piogenism. Streptococci and staphylococci readily fraternize with the tubercle bacillus, and when they do a train of symptoms and a downward tendency sets in which taxes our resources and skill to the utmost. High fever sweats and

rapid emaciation come with this condition, and unless soon checked or ameliorated lead to a fatal termination. In trying to meet these symptoms one should always bear in mind that they are due to pus-producing organisms and not to the tubercle bacillus. High temperature should be kept down, but not with depressants. Quinine and small doses of phenacetine or para-aceto-phenetidine are drugs worth trying. Hydrotherapeutics have a legitimate place here. Whatever else is done, the natural resources of the economy must not be lost sight of, and for this reason the digestive tract should be carefully looked after and an abundance of easily digested food supplied to the patient. In my own experience creosote and its congeners have given the best results in this condition. I have had no experience with antistreptococcus serum.

With the line of treatment which I have briefly outlined my results during recent years have been quite satisfactory. In looking back I can see that the improvement in my results has kept steady pace with the growth of my experience and the development of my method of dealing with the smallest details of my patient's daily life. My results with home treatment during the last six years are approximately indicated in the accompanying table, computed from my case book. In preparing the table I have only used cases which were under treatment for a period of not less than two months. I have excluded advanced cases if they lived over two months, and I have excluded a number of cases which simulated tuberculosis so much as to have been diagnosed as such by other men. By the word "cured," in the table, I mean cases in which the patient has been able to resume his usual occupation for at least a year without having had a recrudescence of the disease. By the words "disease arrested" I mean cases in which there has been no activity of the disease for a considerable period of time and the patient has been able to resume his avocation, but where the time has been too short to warrant the use of the word cured. By the words "very much improved" I mean cases in which there has been an increase of weight, an arrest of activity, and a restoration of a fair condition of health, with a resumption of usual occupation in some cases, but where there has been a recrudescence of the disease of minor severity or where the case has passed from under observation at too remote a period to warrant a conclusion. By the words "temporarily improved" I mean cases in which there has been a

very marked improvement, as shown by decided increase in weight, arrest of the disease for a considerable period of time, and a prospect of recovery, but in which for some reason or other a fatal recrudescence of the disease has set in. By the words "not improved" I mean cases in which there has been very little increase of weight and a mere amelioration of the symptoms of the disease:

TABLE.

Cured,	18 per cent.
Disease arrested,	10 "
Very much improved,	26 "
Temporarily improved,	19 "
Not improved,	27 "

Of the cured cases there has been an average increase in weight of a fraction less than 21 pounds. The largest gain has been 40½ pounds and the smallest gain has been 4 pounds. The four patients who made the largest gains averaged 38 pounds apiece. Of the patients which I have classified as having had the disease arrested there has been an average gain of 12 pounds. The largest gain among these has been 26½ pounds and the smallest 2½ pounds. All of these will probably recover. Of the cases which I have designated very much improved there has been an average gain of 7½ pounds. Of these the largest gain has been 20½ pounds. One patient lost 11½ pounds, but in all other respects has apparently recovered. Of the cases which I have set down as having temporarily improved there was an average gain of 8½ pounds. The largest gain was 33 pounds and the smallest 1½ pounds. Nearly all of these at one time promised well for recovery, but after a considerable period of time during which the disease appeared to have been arrested a fatal recrudescence set in. The case in which 33 pounds had been gained terminated quite suddenly in peritonitis. Many of these cases might, I think, have recovered if the patients had been under better control and the treatment had been kept up more continuously.

Of the cases which form the basis of this paper, approximately 15 per cent. applied for treatment in the incipient stage. In all the others there was softening and in many there were cavities. The majority of those which are set down as not having improved were far advanced in the disease when they applied for treatment.

CORRESPONDENCE.

SURVIVAL OF A TRADITION OF LEPROSY OF ZOROASTER'S TIME.

SIR: The daily press is still commenting on the self-sacrificing devotion of a Kanaka wife, who to be allowed to accompany her banished leprous husband to Molokai stained her body to be like a leper. I beg to observe that the history of leprosy the world over abounds with instances of heroic devotion of loved ones to leprous relatives, no less worthy of Christian praise than this one. In every land, Buddhist, Mohammedan, Parsee, or Jew, wherever lepers are found, identical sacrifices are offered. In a leper village near Tokio, Japan, there resided some years ago a daughter of a leper, who, to be near her afflicted parent, mutilated her own hands to be like a leper. On the Tokaido, the imperial road of the empire, a thousand miles long, running from Tokio to Kagoshima, in Satsuma province, you may see on every part of its course, wandering or blind lepers led by the loving hands of wives, husbands or children, who are not lepers, yet have become outcasts to serve the leper. At Asakasa temple, one of the oldest Buddhist churches in that Artimesian land, we one day counted twenty-three leprous beggars, some of whom were accompanied and cared for by relatives who were physically sound. They had become pariah anathema for the sake of the leper. As long ago as 740 A.D. a blue-blooded lepress of Japan devoted her royal life to the cause of lepers. She washed a thousand of them with her hands, and built the first asylum, a hospital in her "heathen" land. Moreover, since a thousand years ago, at the temple of Naruta-Fudo, in Sanuki province, it has been a custom to kiss the sores of lepers to make them well. This duty was performed by relatives with the hope that through an exhibition of so great faith, the God of the fire-worshippers (for Fudoism is a survival since a thousand years before Christ, or from Zoroastrian times) would remove from their families the penalty of heaven, as they believed leprosy to be for sins committed by ancestors. This custom believed in by so many Japanese lepers is a tradition handed down through generations, since 4000 years before the Trojan war. Religions

have come and gone, but it lives. Parseeism, Brahmanism, Taoism, Confucianism, even Japanese agnosticism of to-day, or the Christianity which it is accepting, have not been able to eradicate it. It speaks volumes for the incurability of leprosy, and is without doubt the oldest tradition of leprosy in the world.

ALBERT S. ASHMEAD, M.D.

HOCHWOHLGEBOREN!

SIR: Please print the following item from the *London Standard* and oblige, Yours truly,

ALBERT S. ASHMEAD, M.D.,
New York.

A BERLIN COURT SCANDAL.—KAISER WILHELM'S BROTHER-IN-LAW ACCUSED OF ROBBING HIS AUNT'S WAITING MAID.

An action brought against Duke Ernest Gunther of Schleswig-Holstein, the Emperor William's brother-in-law, is now being tried in one of the Berlin civil courts. The previous history of the case suggests something like a romance, and, if the statements of the prosecutrix, Fräulein Anna Milewska, formerly lady's maid to Princess Amelia of Schleswig-Holstein, are true, the affair may have serious consequence in aristocratic circles. The lady's maid asks for the restoration of a sum of 16,000 marks of which she alleges she was illegally deprived at the instigation of the Duke. According to the statement of her counsel, she was engaged by the Princess as lady's-maid in August, 1900. Her relations with her mistress soon became very friendly. The Princess wrote a number of letters to her, beginning "My Dear Anna," or "My Dear Good Anna." There is a photograph in which the Princess and the lady's maid are represented in attitudes pointing to very confidential relations. When Fräulein Milewska was engaged, the Princess was short of money, and her maid lent her her savings, amounting to 80,000 marks.

In the beginning of the year, the Princess, accompanied by her maid, went to Cairo. On the way there, at Malta, a new footman, who described himself as a chamberlain, suddenly joined the party, and, in ignorance of his mistress's financial embarrassments, greatly increased her expenditure. The maid feared that the rest of her savings, about 30,000 marks, which she also placed at the Princess's service, might be spent, and accordingly asked for 25,000 marks back, which she received.

This sum was afterward spent, she says, on behalf of the Princess.

At Cairo a strange thing is said to have happened. One day, when out shopping, the maid was surprised by two men unknown and taken in a carriage to the French police station. After several days' confinement, a person calling himself Count Blumenthal presented himself, and in the name of Duke Ernest, expressed regret that such unceremonious treatment had been necessary. The Duke, he said, desired her separation from the Princess at all costs. No reasons for this were assigned, and the maid's request that she might be legally tried for any misdemeanor was roughly disregarded.

Soon afterward the maid was informed that her room had been searched, and a handbag, containing about 20,000 marks, as well as the keys of the Princess's boxes, confiscated. Her protestations that the money was her property, and that she had always kept the purse and defrayed the Princess's expenses were disbelieved, while her urgent request that the latter might be examined was refused.

Fräulein Milewska was compelled to go to Port Said, and thence, under escort, via Naples, to Berlin. Here she fell ill, in consequence of the excitement, and was confined to her bed several months. On one occasion Duke Ernest's counsel, Count Bredow, came to ask her what her claims were, but no more was done.

According to the defense, the Count Blumenthal, mentioned above, was not commissioned by the Duke to take away any money from the maid, but only to inquire into the relationship between the Princess and her maid. The latter, it is said, tyrannized over her mistress, who was 75 years of age, and exercised a bad influence upon her. Count Bredow, the Duke's counsel, could not precisely state who had ordered or instigated her arrest by the Egyptian police. It was not admitted that Her von Blumenthal had managed this. As regards the man who joined the Princess at Malta, he had never, it is said, been her chamberlain, but was merely one of her acquaintances, who sometimes did commissions for her. Count Bredow accuses him of having taken the maid's money and transferred it to other persons, not yet identified. It is said that the expenses connected with the late Princess's illness and her subsequent death were defrayed out of the money found in the maid's bag.

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A. H. OHMANN-DUMESNIL, A.M., M.D.,
Editor and Proprietor.
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EDITORIAL.

THE LATE HEATED TERM.

This has been anything but a local affair. In fact, the intense heat developed in June not only prevailed throughout the greater part of the United States but made itself felt in Europe. From a medical point of view it has possessed more than ordinary interest. It is true that the heat was dry as well as very intense, and this may account for the fact that cases of insolation were not as many as have been observed at times when the heat was not so intense. On the other hand, thermic fever was most markedly developed, and deaths from this cause were numerous. So numerous were these that they rose to the position of becoming a public concern, and much alarm was felt at the possibility of any one being so affected. The suddenness of the oncome of the intense heat had no doubt much to do with this. When the extremely high temperature in Paris led to a large number of suicides, the circumstance was attributed to the mercurial temperment of Parisians and their volatile nature. But when shortly

after the list of Americans who committed self-destruction on account of the heat became rather prominent, the reason was looked for in the thermic conditions which prevailed. This condition will certainly prove a fertile field of labor for the investigations of neurologists and psychiaters.

The heated term has had further marked effects of a fatal character in a different direction. It has been in the way of producing enteric diseases, more especially in infants and young children. Enteritis, gastro-enteritis, and meningitis have been very common and the mortality has been frightful. It has been a veritable massacre of the innocents. That universal disease, summer complaint, has been prominently in evidence, and the avidity with which infants sought a breath of fresh air was pitiful to see. Much good has been done by the Fresh Air Missions wherever such existed, and there is no doubt that they have saved many a young life which the withering hot blasts of tenement houses in large cities would have rapidly terminated.

Business has been halting, labor has languished; in fact, everything has felt the baleful effects of the prolonged season of intense heat. Electric fans have failed of their mission, for instead of furnishing cooling breezes they have only intensified the condition by forcibly projecting the heated atmosphere against the already overheated individuals and thus increased their discomfort. Hopes are entertained that the reaction for the better will soon be experienced, and none deserves a cool temperature more than the overworked and overheated physician.

The Marion-Sims and Beaumont Hospital Medical College, since the consolidation, is beyond doubt the leading medical institution west of the Mississippi. The faculty has been both enlarged and markedly strengthened, and the clinical facilities are superior to those of any college, in view of the fact that so many hospitals are available. The student who attends this college will certainly be placed in a position to obtain the best and the largest amount of clinical instruction possible in St. Louis. The faculty intends to make this year of the inception of the new order of things an epoch-making one, and it shall certainly succeed, as it contains a host of energetic men who are at the top of the profession.

SELECTION.

HYPEREMESIS GRAVIDARUM.

BY J. W. P. SMITHWICK, M.D., LAGRANGE, N. C.

This is a disorder that occurs during pregnancy, and in most cases is confined to the earlier stages. It may be said that nausea and vomiting are, to a certain extent, normally associated with the pregnant condition of the female, but in some instances it assumes such proportions that it not only becomes pathological, but extremely dangerous. It may vary in severity from a slight "morning sickness" to an extreme state of nausea and vomiting, so that nothing will remain in the stomach, and even the thought of food will cause retching. The diagnosis of this condition presents no difficulties; the conditions of the nausea and vomiting being present and associated with pregnancy are sufficient. In some of the more severe cases, if allowed to progress, the emaciation and exhaustion soon become a matter of no small moment, and, unless the trouble is brought to a termination, death may occur as a result.

Hundreds and hundreds of things and remedies have been recommended and used for its alleviation, but the experience has been that in most of the severe cases the gravid uterus has to be emptied of its contents to secure relief. In a great many other cases less severe the desired relief comes from less radical measures.

In the treatment of pernicious vomiting of pregnancy it is unusually the custom to put off the radical means—that of producing abortion—as long as possible, and in following one is sometimes confronted with a very grave condition of affairs. The suffering woman is too weak and too much exhausted to stand the operation, and death seems inevitable unless it is done. I had one such case as that, and I well remember what a predicament I was placed in. I had consultation, and we performed the operation of abortion, which seemed the only means of relieving the woman, but she was too much exhausted, and died from its effects. Since that experience I have made it a point to keep on the safe side as far as possible. Of course, it is desirable to save the life of the child if possible, but it is not at all desirable to

sacrifice the lives of both mother and child simply to give it a chance.

As I stated, numerous remedies have been recommended for the treatment of this condition, but I find that ingluvin, manufactured by Wm. R. Warner & Co., of Philadelphia, Pa., gives me the best clinical results. I have frequently seen patients who would vomit immediately upon taking anything into the stomach almost relish this preparation, and the vomiting immediately cease, irrespective of its primary cause. Having had such good results with it in the various forms of nausea and vomiting, I was induced to try it in the vomiting of pregnancy, both physiological and pathological, and have had excellent results up to date. In those patients in whom the vomiting amounts to nothing more than the "morning sickness," which may be considered physiological, I have found it to give a very great amount of relief, as well as in others, when it becomes to be pathological. It relieves the nausea and increases the appetite and assimilation to a marked degree, so that the patient's system is put in an excellent condition to undergo the ordeal of labor. By relieving the nausea and increasing the assimilation and digestion, it aids in regulating the functions of the liver and kidneys, and other emunctories of the organism, thereby overcoming all tendencies to the occurrence of post-partum complications and eclampsia.

I relate a few cases which I have treated to illustrate specifically the results I have had with the use of ingluvin, as follows:

Mrs. Mary ——, aged 22, primapara. Began suffering, presumably about the third week of pregnancy, with nausea and vomiting of rather a severe type. I was called, and administered some of the customary remedies, but she continued to grow worse, until about the tenth week, when I was seriously considering within myself the propriety of inducing an abortion. However, having had good results with the use of ingluvin in nausea and vomiting due to other causes, and associated with other conditions, I determined to test it in this case. I prescribed it in fifteen-grain doses every four hours. The first dose was retained, quite to my surprise, as hitherto she had vomited everything taken into the stomach, and the only way she could retain anything, even for a short time, was to take it immediately after a vomiting attack. From this time on she began to improve, being troubled only occasionally with nausea and vomiting, until

she finally recovered. She gained about twelve pounds in weight, and went through the remainder of the pregnancy and the period of confinement without any difficulties.

Mrs. S. ——, aged 32. This was the third pregnancy. She had been troubled no little with nausea and vomiting during the preceding pregnancies, but at this time the condition was very greatly exaggerated beyond what it had been. She consulted me during the sixth week, stating that there were very few times she could retain either food or drink in her stomach. Her bowels were constipated, skin thick and sallow in appearance, and tongue heavily coated. She was much emaciated, and in low spirits, as she had had some difficulty with former births, all being instrumental deliveries, due to inertia of the uterus. I prescribed ingluvin in three daily doses of fifteen grains each. In one week she reported that she was improving rapidly, having only had during that time two spells of nausea and vomiting. Her appetite was good, and she could retain almost anything that she desired for food. Her bowels were in an active condition, and skin much better in appearance. Her spirits were decidedly more buoyant. I directed her to continue the medicine in the prescribed dose until near the time of confinement. She did so, and I attended her. The labor was perfectly normal in all respects, and was a short one when compared with her previous labors, lasting about six hours. Convalescence was rapid, and recovery complete, and she stated that she never felt so well that early after a confinement. I attribute all the improvement in this individual case to the use of ingluvin, being fully convinced of its value as a therapeutic agent.

Mrs. Sarah G——, aged 24, second pregnancy. I was called in consultation in this case for the purpose of considering the propriety of inducing an abortion on account of pernicious vomiting. I found the patient in a very weak and exhausted condition, due to almost incessant retching and vomiting. She has been unable to retain anything in the stomach, in the way of food, for the last three weeks, and rectal alimentation had been resorted to, but now the rectum had rebelled, and there seemed nothing left that held out any hope of relief at all except an induced abortion. This was the only thing left to do in the mind of her medical attendant, but I am sure that death would have resulted. I advised the administration of ingluvin in doses of

fifteen grains every three hours, and very small quantities of such nourishment as she most desired. The first dose was promptly vomited, as everything else had been for the past few weeks, but it was immediately repeated, and was retained. From this time on there was no trouble about retaining the medicine, though her stomach was very weak for the first few days, and only very small amounts of nourishment could be taken and retained. Once or twice during that time she had severe vomiting spells, but they eventually passed off, and she did well the balance of the term, and was delivered of a healthy baby. There was no post-partum trouble.

I frequently administer ingluvin to my patients who are in a pregnant condition and are suffering with nausea and vomiting of a mild degree, and find that it gives a very great amount of relief and comfort. They gain weight during its administration, and their systems are put in a healthy condition, and they are much better prepared and able to stand the strain of labor than those who have not taken the preparation. I have never had a patient have eclampsia after taking ingluvin, which, of itself, is no small recommendation for it. Ingluvin has, on every occasion served my purpose well; indeed, far better than anything else I have ever tried, and I heartily recommend it to the profession.—*Southern Medical Journal.*

German School Reform Congress.—The second annual gathering in Germany of persons interested in the hygienic evolution of schools, met at Wiesbaden, May 31. Resolutions were adopted urging the appointment of medical inspectors for all institutions of learning, from the lowest to the highest. The substitution of the Latin handwriting for German script was almost unanimously advocated. We mention gratefully, by the way, that our German medical exchanges are always printed in the Latin letters; that is, the same as used in America, France, England, etc.—*Jour. A. M. A.*

BOOK REVIEWS.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. Vol. II. June, 1901. 8vo., pp. 470. Surgery of the Abdomen, including Hernia, Gynecology, Diseases of the Blood, Diseases of the Glandular and Lymphatic System, Metabolic Diseases, Ophthalmology. With Eighty-one Engravings and One Full-page Plate. [Philadelphia and New York: Lea Brothers & Co. 1901. Issued Quarterly. Price, $10.00 per year.

The present volume of Progressive Medicine is a finer example of the scientific activity in medicine and surgery which has been ushered in with the new century. This work has not only met with a large sale, but with much appreciation abroad. We are more than pleased to note that the Grand Prize was awarded to it at the Paris Exposition of 1900. That is indeed an honor in which both editor and publishers should feel a justifiable pride. We certainly do, and such distinction bestowed upon American medical publications were few enough in number to justify our calling attention to them.

But to return to the book before us. The first article, by Dr. William B. Coley, covers the entire field of abdominal surgery. An excellent account is given of the latest technique of the various operations which have been devised for the radical cure of the different forms of hernia. Dr. Coley describes these in a particularly clear manner and adds comments of his own, which not only serve to elucidate the subject, but are full of suggestions of value. In addition to this, he reviews thoroughly the operative treatment of gastric ulcer and intestinal perforation. This is very properly apropos, as surgery has recently made wonderful advances in these operations, and the indications are that these advances are but an indication of what we may be justified to hope for in the not distant future.

The section devoted to gynecology is, from a pathologic point of view, one of the most important that has appeared in the series. It is edited by Dr. John G. Clark, and the subject of the parasitic origin of malignant growths is well elaborated. The recent studies in blastomyetic dermatitis have done much in the development of this subject, and we may hope to soon have definite knowledge on this subject. As far as the value of spinal cocainization in gynecology and obstetrics is concerned, the author

counsels care, and thinks it better to wait until more definite knowledge on the subject is obtained. The most valuable portion of this part is the editor's study on the circulation of the ovary, a work which has cleared up many of the problems connected with ovulation and menstruation, and which has been published in full in a volume of the Johns Hopkins Hospital Reports. A reading of the abstract given in this volume will certainly lead to a serious study of the entire monograph on the subject.

Dr. Alfred Stengel has quite an important chapter on the blood, the ductless glands, hemorrhagic and metabolic diseases. Diabetes mellitus occupies more space than any other subject in this article, and most deservedly so; although a fair share of attention is given to pernicious anemia and allied conditions. In fact, the entire chapter is good.

The volume concludes with a résumé of progress in ophthalmology by Dr. Edward Jackson. It is well written, and all the selections have been made with great care and discrimination.

As we have remarked on a previous occasion, the contents of each volume of Progressive Medicine do not simply consist of abstracts of articles published by various authors, but are rather critical reviews of progress made, and written by men of eminence, high attainments and large experience. This is what renders them so valuable and sought after by readers of medical works. The work, of which we have a volume before us, has acquired an enviable reputation, which is certainly well earned.

Annual and Analytical Cyclopædia of Practical Medicine. By CHARLES E. DE M. SAJOUS, M.D., and One Hundred Associate Editors. Assisted by Corresponding Editors, Collaborators and Correspondents. Vol. VI. Royal 8vo., pp. 1043. Illustrated with Chromo-Lithographs, Engravings, and Maps. [Philadelphia: F. A. Davis Co. 1901.

The present is the best volume of the present series of this stupendous work, and the editor is to be congratulated upon having brought it to such a successful termination. It is a large volume that is before us, and one which contains most important subjects. Thus we have the subject of Rheumatism, handled in a masterly manner, by Dr. Levison, of Copenhagen. He is most thorough in the consideration of his subject, and throws much light upon this rather hackneyed but still badly understood condition. Diseases of the Stomach receive more than ordinary attention at the hands of Dr. D. D. Stewart, of Philadelphia. Drs. W. W. Keen and M. B. Tinker, of Philadelphia, are very thorough in their account of the progress made in the past years in the Surgery of the Stomach and Intestines. In fact, this is one of the leading articles of the volume and is deserving of more than ordinary care in its perusal. The Surgery of the Spine is the subject of thorough consideration by Dr. Reginald H. Sayre, of

New York. His reputation as an orthopedic surgeon is too well established to necessitate any words of commendation at our hands. His articles are always well written and to the point, as well as much sought after by the medical profession.

Dr. G. Frank Lydston, of Chicago, takes up the subject of Syphilis in a well-considered article. Whilst limited in the space allotted to him, he fills it with material of the most useful sort, and he turns out an article which makes most interesting reading as well for the specialist as for the general practitioner. We would particularly commend this contribution to the advances made in syphilology in the past few years. The Surgery of the Urinary System is much above the average, which was naturally to be expected, as it was written by Drs. J. W. White and A. C. Wood, of Philadelphia. In speaking of Bottini's operation, it is regarded as being particularly indicated in those cases in which there is a distinct bar at the neck of the bladder. The enthusiastic recommendation of this operation in all cases of prostatic hypertrophy has evidently undergone a natural death, as it certainly should have, and selected cases are now taken for its application. A by no means unimportant subject is that of Diseases of the Uterus, which are considered by Dr. H. T. Byford, of Chicago. As might be expected, this is a most interesting as well as valuable exposition of the subject, which will be read with more than ordinary avidity by gynecologists. As germane to this is the report on Diseases of the Uterine Adnexa, by Dr. E. E. Montgomery, of Philadelphia. His reputation as a writer is so firmly established that we could expect nothing from his pen except the best, and that is just what he furnishes.

Drs. L. A. Stimson and E. L. Keyes, Jr., of New York, have contributed one of the particularly interesting articles of this volume, the subject being Wounds and Injuries of the Chest. This is most important from a surgical standpoint, and when considered by such authors as do so in the volume before us, an added value is conferred upon the entire work. Yellow Fever possesses an added interest for the medical profession of this country, more especially in view of the fact that our military possessions have been extended to countries where this disease is very prevalent. The consideration of this subject has been entrusted to the care of Dr. Walter Wyman, formerly of St. Louis, and now Surgeon-General of the Marine Hospital Service. No more competent man could be chosen, and he has discharged his task in a most thorough and competent manner.

We have mentioned but a few of the more prominent articles in the volume before us; but every one is deserving of praise, and it is only space which prevents our dwelling on each one. As the general scope of the work demanded, the more prominent opinions of authors published during 1897, 1898 and 1899 are given in their proper places in the articles, a method which serves

but to enhance the value of each report and make the work more thorough.

The volume before us, like the others of this work, is handsomely printed, illustrated, and bound. The cyclopedia is a library in itself and one to which reference is easy, and this is made still more so by the general index which closes this volume. It consists of one hundred and nine pages of small type in double column, and everything referred to in the six volumes is not only mentioned, but the subject-head under which it may be found is pointed out, making the task of finding it much easier. The page number has not been used, as being too clumsy, and it is really unnecessary in a work printed in an encyclopedic style. We cannot cease admiring the work, and can heartily recommend it to physicians and surgeons who desire quick references to progress made in medicine and surgery up to date.

Traite des Affections Veneriennes. Par le PROFESSEUR EDMUND LESSER. Seconde Edition Française Traduite sur la 9me Edition Allemande. Par le Docteur ADRIEN BAYET. 8vo., pp. 352. [Bruxelles : A. Manceaux, 5 rue des Minimes. 1901. Prix, 10 francs.

In the work before us we have presented a most excellent translation of Lesser's work. It has been improved in so far as the introduction of plates illustrative of some syphilitic conditions is concerned. This addition has been made by the translator, the pictures presented having been furnished by Prof. Ed. de Swet. In addition to these a number of engravings taken from the work of Ziegler has also been added, these being the microscopic appearances noted in various venereal diseases.

In looking over the work we find that, whilst a great deal of progress has been made in regard to gonorrhea and chancroid, very little has been added in the domain of syphilis, and yet we would remark that very much has been recently done in the domain of syphilology. It is evident, from the book before us, that such is not the opinion of Lesser, and his translator has not ventured to call attention to these points. This is a circumstance in which we have been disappointed, as we would expect such an expert translator to enrich the work by adding copious notes and annotations and thus remove the impression which a formal and precise translation invariably makes upon the reader. We are certain that such additions as we have suggested could have been made.

Among the more salient points which deserve mention is the study of the biology of the gonococcus which is presented; its reactions in the organism, its metastases, and the distant action of the toxins which it secretes. These various explanations have served to render clear many of the points which had hitherto remained obscure. The subject of chancroid has undergone a

complete change in its classification, and Lesser has adapted himself most completely to the new conditions which have been brought about by the discovery of the Ducrey-Unna bacillus. So far as syphilis is concerned, whilst the bacterium causing it has not yet been discovered, much is introduced of clinical importance, more especially in regard to visceral and hereditary syphilis. Antisyphilitic serotheraphy, which has been experimented with from the most diverse theoretic data, is declared as being worthless so far as everything which has been done up to date is concerned.

The edition of Lesser's work before us is an excellent one and deserving of support. Many who cannot read the original German will find the French translation easier to read and to understand, and they will reap the added advantage of the 16 figures and 9 plates which are to be found in this edition. The publisher has placed the book within the reach of all, as its price is but 10 francs, postpaid throughout the postal union. O-D.

Operative Surgery. By JOSEPH D. BRYANT, M.D. Vol. II. Operations on Mouth, Nose and Œsophagus, the Viscera connected with the Peritonæum, the Thorax and Neck, Scrotum and Penis, and Miscellaneous Operations. 8vo., pp. 563-1302. This volume contains Eight Hundred and Twenty-seven Illustrations, Forty of which are colored. [New York: D. Appleton and Company. 1901.

In this volume of his work the author has sustained the high standard set in the first. He is clear and explicit in his views and sufficiently conservative to gain the confidence of his readers. In fact, whilst he is a bold operator, he is not equally so in expressing opinions, thereby increasing the confidence of all in those which he does advance. He believes that the greatest safety lies in the middle course; and, as his work is designed in great part for students and practitioners, he has very judiciously avoided leading them in dangerous paths. Such a course only wins the approbation of those whose capacities are sufficient to permit them to judge dispassionately, and it also has a certain influence in restraining those whose interest and ambition would lead them to "rush in where angels would fear to tread."

The manner in which operations in the mouth, nose and esophagus are explained is such that one who possesses but ordinary operative skill will be enabled to perform such with success, provided he pays the proper attention to details which they demand. And so it is throughout this whole work.

The author has removed the mystery connected with the operations connected with the viscera, which are themselves connected with the peritoneum, and his descriptions of operations on the intestines and for the various forms of hernia are both masterly and complete, and still are devoid of all intricacy. It

is more especially in operations of the neck and thorax that the author shows his complete familiarity with the subject he has under consideration. He shows himself so perfectly at home that he inspires his reader with confidence such as he has injected into his students at Bellevue Hospital Medical College.

Another department in which he excels, as shown by the volume before us, is the surgery of the male genito-urinary organs. Whilst not pretending to the thoroughness of a special work on this subject, it is sufficiently complete to win the respect of those who devote their entire attention to the one subject. His opinion of the Bottini operation for enlarged prostate is based upon the results of its originator, and they are such as to lead him to conclude that the operation possesses sufficient merits to perform it in the future.

This volume is profusely illustrated, is thoroughly up to date and practical. The publishers have made a handsome volume, the presswork, binding and paper being of a superior character. We can heartily recommend the work.

Guide Populaire d'Hygiene. Manuel de Santé Public par l'Office Sanitaire de l'Empire Allemand. Traduit d'après la Huitième Edition Allemande avec l'Autorisation des Auteurs. Par le DOCTEUR J. CRYNS. 8vo., pp. 278. 55 figures dans le texte et 2 gravures en couleurs hors texte. [Bruxelles: A. Manceaux, 3 rue des Minimes. 1901. Prix, 3 francs.

This popular guide to hygiene is not only popular in name, but equally so in fact. The Sanitary Bureau of Germany has authorized its publication in that country, and its sales amount to hundreds of thousands. This alone should guarantee its translation into French, and introduction into every family in Belgium as well as in France. It is essentially a popular work on hygiene, easy to understand and withal thoroughly up to date. As a newspaper of Liége has observed, it is not an ordinary thing to be able to encompass, in a space of less than 300 pages, a complete essay on hygiene, and to teach every one in a book, easily understood by all, what to do to remain healthy.

There is no attempt made to instruct readers in medicine, but there is in the principles of the methods of rendering first aid to the injured, in nursing, and in the strict necessity of having a physician and of obeying his orders. Nutrition, alimentation, clothing, living quarters, social life, and the hygiene of trades, etc., are all taken up, as well as the hygienic rules to follow in regard to air, water, exercise, and the avoidance of the pollution of wells, etc.

The thoroughness characteristic of the German is thoroughly in evidence in this book, and that it is reliable is certain from the fact that it is authorized by the government. The translation is a most excellent one, and the publisher has placed it within

reach of all, the price being but 3 francs. We anticipate that this translation will meet with a very large sale, which it certainly deserves.

Etidorhpa. The Strange History of a Mysterious Being and the Account of a Remarkable Journey. By JOHN URI LLOYD. 12mo. Eleventh Edition. [New York: Dodd, Mead & Co. 1901. Price, $1.50.

This novel, written by the author of Stringtown on the Pike, is in reality a scientific allegory in which the author advances some startling ideas opposed to many of the accepted scientific dogmas of to-day. His reasoning is good, and whilst the story is interesting, the reader is rather led on by the deeper truths which are taught in its pages. That the author is a student as well as a scholar, is evident upon every page of this story. Physics, astronomy, botany and geology receive a presentment here which makes them fascinating, and there is just enough of the occult given to increase the interest in the story which the reader feels In this edition some chapters have been added which round out the story and complete it in a satisfactory way. The book is destined to meet with a large sale and go through many future editions.

Manuale del Massagio. Del dottor ROMOLO MAJNONI. 24mo., pp. 179. Con 51 Incisioni. [Milano: Ulrico Hoepli. 1901.

MANUAL OF MASSAGE. By DR. ROMOLO MAJNONI.

This little handbook, like the three following, which we will notice, is included in the Hoepli collection of over seven hundred pocket manuals issued at a comparatively cheap price. The one before us is very complete in its direetions for the application of manual and mechanical massage, and certainly deserves being translated into other tongues. The author has added a very complete bibliography of massage at the end of his little volume, and we have no doubt that his opuscule will meet with a large and ready sale.

Igiene della Bocca a dei Denti. Nozioni Elementari di Odontologia. Del dottor LUDOVICO COULLIAUX. 24 mo., pp. 298. Con 23 incisioni nel testo. [Milano: Ulrico Hoepli. 1901.

HYGIENE OF THE MOUTH AND OF THE TEETH. By DR. LUDOVICO COULLIAUX.

In this little manual the author gives some elementary ideas on dentistry. Beginning with the anatomy and histology of the teeth, he gradually leads up to the subject of the proper care of the buccal cavity and of the teeth. He gives eminently proper directions in regard to the hygienic observances to be carried out and insists upon a proper amount of attention being given to the subject. His concluding chapter embraces a long list of formulæ

for dentifrices, tooth powders, and such other preparations as dentists find useful in the treatment of patients. The book concludes with an excellent bibliography.

Manuale di Chirurgia Operatoria. Del dottori R. STEECHI e A. GARDINI. 24mo., pp. 321. Con 118 incisioni. [Milano: Ulrico Hoepli. 1901. Lira 3.

MANUAL OF OPERATIVE SURGERY. By DRS. R. STEECHI and A. GARDINI.

This is a little manual on operative surgery which is singularly complete for its limited number of pages. Celiotomy and abdominal operations in general are omitted, the authors wisely thinking that such are more appropriately treated of in special works. Minor surgery, however, is well considered, and everything in this branch, including the extraction of teeth, is taken up. As a guide to the student and to the beginner in the practice of medicine, it will be found excellent and reliable. The authors have succeeded in condensing a vast fund of useful information in the compass of a few pages.

Soccorsi d' Urgenzia. Del dottore CARLO CALLIANO. Opera premiata dei Ministero dell' Intorno Direz. di Sanità publica. 24 mo., pp. 368. Quinte Edizione riveduta ad ampliata. Con 6 tavola illustrative. (9°—10° migliaio). [Milano: Ulrico Hoepli. 1901. Lira 3.

FIRST AID TO THE INJURED. By DR. CARLO CALLIANO.

This little manual has met with great success in Italy. In the first place it won the prize offered by the Minister of the Interior, and its intrinsic merits are so great that it met with great favor and a ready sale. The copy before us is of the fifth edition and tenth thousand. It is well written and easily understood, and some obscure points have been made plainer by the thorough revision which the author has given the book. We have no doubt that it will soon pass through another edition, which it certainly deserves to do, as it is not only a useful little manual, but is, withal, interesting and practical in its scope.

LITERARY NOTES.

Books Received.—The following books have been received during the past month, and are reviewed in the present number of the JOURNAL:

Annual and Analytical Cyclopædia of Practical Medicine. By Charles E. de M. Sajous, M.D., and One Hundred Associate Editors. Assisted by Corresponding Editors, Collaborators and

Correspondents. Vol. VI. Royal. 8vo., pp. 1043. Illustrated with Chromo-Lithographs, Engravings and Maps. [Philadelphia : F. A. Davis Co. 1901.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. Vol. II. June, 1901. 8vo., pp. 470. Surgery of the Abdomen, including Hernia—Gynecology—Diseases of the Blood, Diseases of the Glandular and Lymphatic System, Metabolic Diseases—Ophthalmology. With 81 Engravings and One Full-page Plate. [Philadelphia and New York : Lea Brothers & Co. 1901. Issued Quarterly. Price, $10.00 per year.

Etidorhpa. The Strange History of a Mysterious Being, and the Account of a Remarkable Journey. By John Uri Lloyd. 12mo. Eleventh Edition. [New York : Dodd, Mead & Co. 1901. Price, $1.50.

Manuale del Massagio. Del dottor Romolo Majnoni. 24mo., pp. 179. Con 51 incisioni. [Milano : Ulrico Hoepli. 1901.

Igiene della Bocca e de Denti. Nozioni Elementari di Odontologia. Del dottor Ludovico Coulliaux. 24mo., pp. 298. Con 23 incisioni nel testo. [Milano : Ulrico Hoepli. 1901.

Manuale di Chirurgia Operatoria. Del dottori R. Steechi e A. Gardini. 24mo., pp. 321. Con 118 incisioni. [Milano : Ulrico Hoepli. 1901. Lira 3.

Soccorsi d'Urgenzia. Del dottore Carlo Callians. Opera premiata dai Ministero dell' Intorno Direz. di Sanitá publica. 24mo., pp. 368. Quinta Edizione riveduta ed ampliata. Con 6 tavola illustrative. 9°—10° migliaio). [Milano : Ulrico Hoepli. 1901. Lira 3.

Traité des Affections Vénériennes. Par le Professeur Edmond Lesser. 2me Edition française traduite sur la 9me Edition Allemande. Par le Docteur Adrien Bayet. 8vo., pp. 352. [Bruxelles : A. Manceaux, 5 rue des Minimes. 1901. Prix, 10 francs.

Guide Populaire d'Hygiène. Manuel de Santé publié par l'Office Sanitaire de l'Empire Allemand. Traduit d'après la Huitième Edition Allemande avec l'autorisation des auteurs. Par le Docteur J. Cryns. 8vo., pp. 278. 55 figures dans le texte et 2 gravures en couleurs hors texte. [Bruxelles : A. Manceaux, 3 rue des Minimes. 1901. Prix, 3 francs.

Operative Surgery. By Joseph D. Bryant, M.D. Vol. II. Operations on Mouth, Nose, and Œsophagus. The Viscera connected with the Peritonæum; the Thorax and Neck, Scrotum and Penis, and Miscellaneous Operations 8vo., pp. 563-1302.

This Volume contains Eight Hundred and Twenty-seven Illustrations, Sixty of which are Colored. [New York: D. Appleton & Company. 1901.

Matthews' Physician's Blue Book. Messrs. Lewis S. Matthews & Co., of 714 Pine Street, St. Louis, announce the early publication of their Physician's Blue Book, which will be a complete and accurate directory of physicians of the State of Missouri. We are assured that it will be thoroughly reliable, and is the first one of its kind that has been successfully attempted. This will certainly fill a long-felt want, and we have no doubt that it will meet with a flattering reception at the hands of the Missouri profession, as it certainly should. Messrs. Matthews & Co. have shown commendable enterprise in this and they are already assured of success by the large number of subscribers which they already have.

The Railway Surgeon has enlarged its size to quarto and correspondingiy increased its subscription price to $5.00 per year. It is now printed on better paper and presents a better typographical appearance than hitherto Dr. Louis J. Mitchell is editor, and it is now the official journal of the International Association of Railway Surgeons. It is still published at Chicago by the *Railway Age and Northwestern Railroader.*

The Oklahoma Medical News has reached us. Its initial number bears the date of July, 1901, and it is certainly a credit to the "strip." It is an octavo of 32 pages, appearing monthly, the subscription price being $1.00 a year. Its home is Oklahoma City, and its claims for circulation are certainly magnificent. Dr. J. R. Phelan is editor, and C. A. Phelan business manager. In the editorial we are told that its purpose "is to advance the interests of the medical profession." We hope that the Oklahoma *Medical News* will succeed in all of its aspirations, and would recommend a change of printers or better work at the hands of the present one.

Facts and Figures, medical and otherwise, from the census of 1900 and other reliable sources, is a handsome 12mo pamphlet of 64 pages, issued jointly by the New York Pharmacal Association, the Arlington Chemical Co. and the Palisade Manufacturing Co. of Yonkers, N. Y. The wealth of maps, diagrammatic charts and statistics on interesting topics, medical and otherwise, is great. In fact, the amount of interesting matter contained within its pages is something incredible. The book terminates with a gazeteer of the United States. We would advise every physician to obtain a copy, as much of value from a medical standpoint is given. A request addressed to any of the firms publishing it will meet with a ready response.

MELANGE.

Dentists for the English Army.—The British war office has, according to *The Lancet*, recently been asked to send to the army in South Africa four dentists, with the view to prevent the invaliding of the men by reason of "bad teeth." The authorities have complied, and have applied to the British Dental Association for advice as to instruments, furniture, etc. The medical officers of the navy are now specially trained in dentistry; moreover, a complete set of dental instruments is supplied to each ship as part of the new outfit of surgical instruments.—*Jour. A. M. A.*

Testimonials and Patent Medicines.—The manner in which at least one large patent medicine manufactory secures its recommendations were recently exposed in this city. Two young men, agents of the Peruna Medicine Company, approached Mayor Foeltzer with an offer of one dozen fine photographs for a recommendation of the wonderful curative powers of Peruna. "But," said the Mayor, "I have never even seen a bottle of Peruna, let alone being lifted from the brink of the grave by using it." "That doesn't make the slightest difference," replied the agent coolly; "all you are asked to do is to sign your name as the mayor of Benton Harbor at the bottom of a sheet of paper and authorize us to write the recommendation. No one here will ever know anything about the affair, as the recommendation and photo will be published in only eastern papers. It will help us to sell Peruna and will help you to get a dozen photos." The mayor read a severe lecture to the agents and then gave them two seconds to leave his presence. Suppose, for instance, that a sick person is led to dismiss the doctors and to feed on Peruna by these fake recommendations, and then dies. Wouldn't it come pretty close to murder—murder for a dozen photographs? The Peruna agents succeeded, nevertheless, in placing a great number of photographs in both St. Joseph and Benton Harbor. In St. Joseph recommendations were secured from some of the highest city authorities and most reputable citizens. These will be published

in hundreds of newspapers in the eastern States and will lead perhaps thousands of sufferers to pay their good money for a worthless medicine. Worthless, because it is presumed that an honest medicine would be boomed exclusively by its merits.—*The Evening News; Jour. A. M. A.*

Prof. Ernest Besnier Advocates Leprous Legislation for France.—

SPECIAL LEPROSY HOSPITALS.

Paris dispatch to *The London Daily News.*

An interesting paper on leprosy was read by Dr. Besnier at the last sitting of the Academy of Medicine. Special importance attached to the occasion, as Dr. Besnier's very exhaustive investigations were undertaken at the instance of the public authorities.

A Benedictine monk, Dom Sauton, who is also a doctor, and who has made a special study of leprosy, asked permission some time ago to establish a sanatorium for lepers at Ronceaux, near Neufchâteau, in the Vosges. The local population offered strong opposition to the project, and the matter was referred to the Minister of the Interior, who decided to ask the Academy of Medicine to study the question of the possibility of danger resulting to the neighborhood from the creation of the sanitorium.

Dr. Besnier's report embodies the conclusions of the learned committee charged by the Academy with the investigation of the problem. The report will be a disagreeable surprise to the public, among whom it is the common opinion that leprosy has disappeared from France. This is not the case. There are certain districts, notably in Brittany and the Alpine regions, in which the malady is endemic. Moreover, of late years the disease has shown a marked tendency to spread.

A quarter of a century ago it was extremely rare for the Paris hospitals to be called on to treat a case of leprosy, whereas today there are fourteen cases in treatment in the Saint Louis Hospital alone. Dr. Besnier, in accord with the majority of specialists, is of opinion that a leper's sanatorium is indispensable for the proper treatment of the disease, and offers no danger to the general public, provided it be very strictly conducted. To insure this end he advocates the passing of special legislation.

Morphine Amongst Medical Men.—A recent writer in a medical journal states that the morphine habit is prevalent amongst men of the medical profession to the extent of six to ten per cent.—ho doubt an exaggerated statement, but a truly alarming one. This is one of the sad things in the profession of medicine, that many go down to physical and mental bankruptcy through the self-administration and indulgence in drugs, powerful for good, yet equally potent for evil. Perhaps the profession is peculiarly adapted for this self-inflicted harm, because of the hours of idleness which often fall to the lot of the young practitioner. All of us, probably, know some one, either of our classmates or others, who have become slaves to this vice; and, although it may not have become so universal as the writer in question states, it is widespread enough to cause medical faculties, teaching bodies, and the older members of the profession to raise their voices in emphatic and vehement protest and warning against this besetting sin. To the medical man often is attributed the downfall of the patient; and whilst this may be true in some instances, probably the great majority of these could justly be laid at the doors of the "repeating" druggist. Opium, morphine, chloral, cocaine and chloroform are drugs which the young as well as the old must handle with the utmost care; and whilst it may be necessary for the doctor to administer these to himself in isolated instances, it is much better, and in the long run wiser, for him to shun them altogether, and only take them on the advice of another practitioner, and even then it is better for him not to know what he is taking. Tablet triturates and the hypodermic syringe may have had much to do with the growth of these practices, and it might be well for us to revert to solutions in the administration of such dangerous drugs. Albeit, the habit is on the increase within the last decade, not only in the profession, but as well among the laity; and an early and timely warning repeatedly given to the young man who is about to embark upon his professional career, will serve good purpose in preventing these wrecks by the wayside.—*Dominion Medical Monthly.*

Oxygen in Therapeutics.—F. Klemperer (*Ther. d. Geg.*) says that the benefits of the inhalation of oxygen are probably due to its direct action on the nerve centers. Michaelis has used about 150,000 liters of oxygen on his patients, and, with but one

exception, has always noted a more or less marked subjective euphoria follow its use. The pulse and respiration become slower and more regular, and the same effect is observed in idiots and in comatose patients, excluding the effect of suggestion. Inhalations of oxygen have proved useful in intoxications and in dyspnea—it is an actual antidote to carbon dioxid—and also in intoxications from exhalations in mines and tunnels. It has been recommended for methemoglobin intoxication. Michaelis cured a case of morphine poisoning by this means, the patient being in profound coma and breathing only by artificial respiration. Spontaneous breathing followed the first inhalation of oxygen, and every time the respiration grew weak again, the oxygen restored it, strengthening the pulse and diminishing the cyanosis. Strychnine intoxication is also favorably affected by oxygen. After saturation of the blood with oxygen, it is impossible to induce convulsions in animals with strychnine or other reflex poisons. These inhalations have been advocated recently also for alcohol intoxication and in chloroform narcosis. Dyspnea is the second great indication for the inhalation of oxygen. Babinsky has reported the case of a girl of 13 suffocating from a piece of food in the trachea. The dyspnea and cyanosis were extreme, but the inhalation of oxygen raised the pulse and the lips became red. The transient restoration of circulation in such cases or with tracheal or laryngeal stenosis from compression by the thymus, may tide the patient past the danger point. The benefits of oxygen in bronchitis, emphysema, and asthma are generally known, but in pneumonia or pleuritis, the compression or infiltration of the lung prevent the absorption of the oxygen. Cardiac asthma is favorably modified by the oxygen and likewise severe asthma caused by the compression of an aneurysm. Aside from intoxications and dyspnea, the benefits reported from the use of oxygen are probably due more or less to suggestion, as, for instance, the favorable effects in a few cases of chlorosis, nervous vomiting, the vomiting of pregnancy and uremic conditions. Anemia, leukemia and diabetes did not seem to be affected by the oxygen.—*Jour. A. M. A.*

The Association of American Medical Editors.—The annual meeting of the editors' association was held at St. Paul, June 3-5, 1901, the sessions being convened in library hall of the

Ramsey County Medical Society. This was the most successful meeting held for fifteen years, both from point of attendance and the high standard of excellence of the papers presented. Of especial moment was the paper presented by Dr. Burnside Foster of St. Paul, entitled "Some Thoughts on the Ethics of Medical Journalism," which was discussed by Doctors Lancaster, Gould, Love and others. At the instance of Dr. Foster, a committee consisting of Doctors Simmons, editor of the *Journal of the A. M. A.*, Gould of *American Medicine*, and Foster of the *St. Paul Medical Journal*, was appointed to amend the constitution and by-laws of the association by adding certain rules concerning the nature of the advertising which is to be admitted to the pages of the journals in affiliation with the association. These rules are to be binding on all members, the committee also being advised to suggest such revision of the constitution and by-laws as may be deemed advisable.

Among other papers read were those of Dr. John Punton, entitled "The Relative Value of Medical Advertising;" that of Dr. Dudley S. Reynolds, entitled "Improvements in Medical Education;" Dr. Harold N. Moyer, "Relation of the Medical Editor to Original Articles.'

The association adopted resolutions favoring the establishment of a psycho-physiological laboratory in the Department of the Interior at Washington, D. C. It also appointed a committee to draft a resolution requesting the Board of Directors of the Louisiana Purchase Exposition Co., in charge of the St. Louis World's Fair, to recognize and commemorate in a suitable manner the great work done in medicine and surgery. *The American Medical Journalist* was selected as the official journal for publication of papers and proceedings.

The annual dinner of the association was held at the Metropolitan Hotel on the evening of June 3d, President Stone acting as toastmaster. The speakers of the evening were Doctors Love, Stone, Moyer, Matthews, Marcy, Fassett, Hall. They confined their remarks to subjects of interest to medical editors, and contributed not a little towards the scientific features of the meeting.

At the session of June 5th the officers for the ensuing year were elected as follows: President, Dr. Alex. J. Stone of St. Paul; vice-president, Dr. Burnside Foster of St. Paul; secretary and treasurer, Dr. O. F. Ball of St. Louis.

The executive committee appointed for the ensuing year consisted of Drs. Gould, Matthews, Lillie, Fassett, Marcy.

The next meeting will be held at Saratoga Springs, N. Y., in June, 1902.

Ureteral Retrodisplacements.—The operations for the various conditions are enumerated by Coggeshall as follows (*Am. Jour. Obst. & Gyn.*): 1. The Alexander operation unmodified when there is a retroversion or retroflexion without adhesions so that the uterus is replaced with perfect ease; if the woman is still of child-bearing age; if the uterus is not markedly enlarged by actual hyperplasia, and if the symptoms confirmed by bimanual examination with or without ether, indicate nothing wrong with the adnexa and no evidence of fibroids. 2. The Goldspohn operation under the following conditions: Whenever in performing the Alexander, the ligament is broken or difficult to find, and also in a large number of retroversions where we can not be positive about the non-implication of the adnexa or where we know that diseased tubes or ovaries need to be dealt with or adhesions to be broken up, always provided that the adnexa are not too large to be brought out through the enlarged ring. 3. Posterior colpotomy followed by an Alexander seems more convenient than the last mentioned operation, when there is a large degree of retroflexion with adhesions, or of diseased adnexa, but are not too large to be brought out through the ordinary posterior vaginal incision, and are also markedly prolapsed. It is also the best operation in cases of retrocession, as the most imporant measure for the cure of this form of retrodisplacements is the free division of the uretero-sacral ligaments. 4. Where it is necessary for any purpose to open the abdomen by median incision, Gilliam's operation is the most convenient method of fastening the uterus in place except in cases where the round ligaments have undergone much atrophy. It has an advantage over doubling the ligaments on themselves, in throwing the thin distal portion of the ligament out of use, and depending upon the stronger proximal portion for support. It also changes their direction so that they pull more directly in the line required. 5. Where the round ligaments are not available, which hardly ever happens except in women past the menopause, ventral fixation may be employed. It is hardly ever the operation of choice, but

one is sometimes driven to it by necessity. 6. Vaginal hysterectomy is, in Coggeshall's opinion, perfectly legitimate as a remedy for retroversion, especially with prolapse in women past the menopause, where there is marked atrophy of the vaginal wall, especially if there is any degree of ptosis of the abdominal organs generally. 7. The repair of lacerations of the cervix and perineum with the addition of anterior colporrhaphy where indicated, is a simple and effective means of treating moderate degrees of retroversion, especially accompanied with some prolapse in women who are not certainly past child-bearing, or even in older women where neither atrophy of the deeper layers or vagina, nor enteroptosis is present. He does not believe that the present state of abdominal surgery has yet advanced to the point of so reducing the risk of opening the peritoneum to justify it where there is a very probable cure by a less serious operation.—*Jour. Am. Med. Assn.*

The Latest Don'ts.—The *Journal of the N. Y. County Medico-Pharmaceutical League* contains some of the latest don'ts, which are worth repeating:

Don't incise an infantile articular rheumatism.

Don't recommend nurses who only attend patients at intervals; who are afraid of fatal cases, or who will not accommodate you in an emergency.

Don't tell a patient to say, "Doctor need not call—she has been sent to the hospital."

Don't tell the patients that they got fever "from the medicine."

Don't go to a doctor's office to tell him that he need not keep your appointment.

Don't think that because you have a "pull" in a big institution you can afford to offend everybody.

Don't "accommodate" charity patients with sectarian institutions and other luxuries, any more than you would advise "universal" dry goods stores for medicines, etc.

Don't consider lay "directors" in any better light than the wealthy butcher, who would enrich himself still more by giving bread away free to all and thereby starving the honest, struggling baker.

Don't allow the deliberate assault of a young rascal to go unpunished, even at the risk of being called poor.

Don't call a lodge-doctor or druggist a "scab."

Don't crawl to anybody.

Don't forget that hemoptysis may occur during a pleuropneumonia.

Don't substitute another consultant for your friend.

Don't write expensive prescriptions in dispensaries, unless you really fill them.

Don't be altogether skeptical about telepathy, when you know that a pigeon can reach its home from two hundred miles away.

Don't get a bloated cranial apparatus after graduation.

Don't say, "He cannot compare himself with so-and-so."

Don't forget that money is not everything.

Don't forget that your rent, through the landlord's taxes, is paying for the new tunnels and bridges.

Don't allow unprincipled real estate speculators to incite your tenants.

Don't return ingratitude for beneficent effort.

Don't accuse a physician on flimsy evidence.

Don't nominate and elect public servants who will make you overpay fifty per cent. on an ash can for the privilege, or outrageous taxes, assessments and rents.

Don't allow a "Felsher" to interrogate you at a patient's house.

Don't forget that there is an "erysipelatous" tonsillitis.

Don't keep obstetric patients choked up in the house for more than three weeks.

Don't diagnose "tonsillitis" for myalgic torticollis.

Don't diagnose "cerebral trouble" for chorea minor.

Don't pinch the perineum with your obstetric forceps.

Don't imagine that proprietary article agents always call outside of office hours unintentionally.

Don't allow "charity nurses" to interview your conduct.

Don't forget that cardiac depression occurs in rheumatism before valvular disease can be detected.

Don't forget that alcoholic stimulants are allowable in pleuropneumonia and in erysipelas.

Don't forget that the discoloration of iodine and the blackening of lunar caustic last longer than the erysipelatous rash.

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ORIGINAL COMMUNICATIONS.

REPORT OF THREE CASES OF MALIGNANT ENDOCARDITIS: ONE FOLLOWING MEASLES, ANOTHER TYPHOID FEVER IN A CHILD AND SIMULATING SPLENIC LYMPHATIC LEUKEMIA, AND ANOTHER TERMINATING IN RECOVERY.*

BY ALBERT E. ROUSSEL, M.D., PHILADELPHIA.

CASE I.—M. O., female, single, aged twenty-two years, white, and an American, was admitted into the Howard Hospital November 21, 1899. The following history was subsequently obtained from the family: The patient had been a remarkably healthy girl, and had only experienced an attack of mumps at the age of six years and an occasional attack of mild bronchitis. She had attended school until eighteen years of age, and subsequent to that time had helped her mother with the household duties and the care of three younger children. Three evenings during the week she assisted her father in taking charge of the books of a beneficial organization.

On or about October 25th the youngest child, and shortly afterward the two others, developed attacks of measles and were nursed by our patient, who in turn contracted the disease at about the time of the convalescence of the children. The malady passed through an apparently regular course, but notwithstanding the remonstrance of the attending physician she insisted on

*Read before the Philadelphia County Medical Society, January 23, 1901.

continuing to look after her brother and two sisters. However, convalescence was apparently well established when, about on November 8th, the patient was seized with a decided chill followed by a high fever and pains throughout the body. After the first few days she lost strength rapidly, was delirious at night, and complained of oppression in breathing. During this time she was treated for supposed typhoid fever.

I saw the patient within a few hours after her admission to the hospital, and found her evidently a very ill woman. The temperature at this time was 103.8°, respiration 36, pulse 128, small in volume and compressible. Expression dull and listless, tongue dry, thickly coated with white fur. Examination of the chest revealed a few small and large moist râles scattered over a wide area; lungs normal. The apex beat of the heart was in the fifth interspace within the nipple line, the impulse was feeble and diffuse, yet the action was tumultuous. The area of dulness apparently was not increased. On auscultation, a distinct rather low-pitched murmur was heard at the apex and transmitted to the axilla.

November 22d, 7 A.M. Temperature, 104°; pulse, 120; respiration, 36. 1:45 P.M., temperature, 104,8°; pulse, 12; respiration, 36. 10 P.M., temperature, 106.4°; pulse, 158; respiration, 48.

The urinary examination, inclusive of the diazo reaction, was negative. The blood did not respond to Widal's test. Red blood-corpuscles, 3,970,000; white blood-corpuscles, 14,000; hemoglobin, 40 per cent. The patient at the time of my visit (1.45 P.M.) was losing ground rapidly. The body was covered with cold sweat. The heart murmur could still be heard, but action was weak and irregular. Malignant endocarditis was mentioned to the interne as the probable diagnosis.

23d. She was delirious during the night, refused food and medicine. At 6 A.M., temperature, 102.2°; pulse, 130; respiration, 56. At about this time the patient entered into a comatose condition and died at about 11 A.M.

Post-mortem by Dr. Boston at 2 P.M. the same day. I wish to state here that, unfortunately, owing to the building of a new pathological laboratory at this time, no cultures were taken.

Heart.—There was no hypertrophy. The muscular substance was pale, the coronary arteries were free. The left auricle was

dilated and seen from above the mitral orifice; it was plugged by a dark clot and it presented large grayish-white vegetations. On section some of these were seen to be about one inch in length and friable, and at the base several distinct ulcers were recognized. The other valves were healthy.

Spleen.—It was enlarged, its pulp soft and reddish-brown; there were no infarcts.

Liver.—It was a little enlarged; there was no extravasation; its tissue was soft and light-brown in color; there were no infarcts. Further examination revealed nothing of importance.

Case II.—J. C., a male, aged nine years, white, and an American.

Family History.—His parents were born in Ireland. His father's occupation was that of a bartender. He died while under my care at about forty-five years of age with sclerotic kidneys and a dilated heart, probably due to over-indulgence in alcohol. The mother was living and healthy. The patient had two sisters living and in good health.

Previous History.—He had measles, chicken-pox and whooping-cough; all under my observation. I emphasize this fact for the reason that I can speak positively concerning the absence of any previously existing heart lesion.

On November 4, 1898, I was called to the patient at his mother's residence and was informed that he had been ailing for the previous week, complaining of anorexia, general malaise, headache, etc. Dating from this time, for a period of exactly twenty-three days, the patient passed through a typical attack of typhoid fever. Relatively infrequent pulse, step-like rise of temperature during the first week, later morning temperature 101° to 102°, evening 103° to 104°; diarrhea, enlarged spleen, iliac tenderness, rose spots, response to the Widal test, and the diazo reaction were all present. At no time, however, were the symptoms unusually severe nor was delirium present.

On November 24th the fever terminated by lysis, and for six days an apparently normal convalescence continued. The tongue became clean, the appetite returned, and it was with difficulty that the boy was persuaded to remain in bed.

On December 1st the patient was suddenly seized with a rather decided rigor, which was repeated on one or two occasions during the following twenty-four hours. Immediately after the chill

there occurred an apparently severe attack of pain, extending over the whole abdominal region. On the following day, and indeed until his admission to the Medico-Chirurgical Hospital, on December 7th, these exacerbations of pain were repeated at intervals and at one time seemed to be localized in the neighborhood of the appendix. Between the attacks the abdomen remained tender and tympanitic, and it was with considerable difficulty that on palpation the appendix was found normal. During this time the temperature on one or two occasions reached 102°, but was normal, at times, during some part of the twenty-four hours. The pulse, however, was now proportionate to the temperature, but examination of the heart revealed nothing abnormal. Increasing pallor and general debility became evident. The spleen, which had diminished in size, was apparently again becoming larger.

On admission to the hospital (December 7th) the temperature was 101.8°; pulse, 116; respiration, 24. On the following morning the temperature was 97°; pulse, 96; respiration, 24, and during the greater portion of his sojourn (thirty-three days) the temperature rarely reached 101° and was quite often subnormal.

A blood examination made shortly after his admission showed white blood-corpuscles, 50,000 to the cubic millimetre; red blood-corpuscles, 3,500,000; hemoglobin, 25 per cent. There were no microcytes, macrocytes, or poikilocytes. Examination of urine negative. The diazo reaction, however, was present.

Under date of December 15th I find the following note: "His condition at the present time seems fairly good; has had no pain for some time past. The temperature is still irregular and the pulse rapid. The action of the heart is tumultuous, but no adventitious sound is heard. The spleen now reaches to one and a half inches above a line drawn transversely through the umbilicus; the liver is two inches below the ribs. He has had several severe nose bleeds. His pallor is extreme. Marked pulsation of the carotids is noticeable. A second examination of the blood shows white blood corpuscles, 44,000; red blood-corpuscles, 3,670,000; hemoglobin, 30 per cent. There is some enlargement of the glands in the groin and axilla."

December 21st. "The spleen to-day is one-half inch below the umbilical line and the upper border is in the sixth interspace.

It is smooth and thickened, and somewhat tender to the touch. The superior border of the liver is in the eighth interspace, the inferior border is one-half inch above the umbilical line. Pitting on pressure is observed generally over the body and the color is that of wax. No ascites is demonstrable. There is throbbing of the vessels of the neck. Tumultuous action of the heart is present, the apex beat is in the fifth interspace, and for the first time murmurs are heard; one is systolic in time and low in pitch; it is heard at the apex and is not well transmitted. Another softer diastolic murmur is heard over the base. Bruit de diable is heard in the vessels of the neck. The axillary and inguinal glands are decidedly enlarged, somewhat soft to the touch, and though not movable are not fused. The cervical glands are the same, but to a lesser extent."

A more detailed examination of the blood at this time gave the following result: Red blood-corpuscles, 3,100,000; white blood-corpuscles, 49,000; hemoglobin, 25 cent. Poikilocytes are quite marked. Megalocytes and microcytes are quite numerous. No organisms could be detected. The white cells: Polynuclear leucocytes, 79 per cent.; mononuclear, 2 per cent.; transitional, 2 per cent.; lymphocytes, 16 per cent.; eosinophiles, 1 per cent. I may state here that subsequent examinations of the blood did not vary much from the foregoing.

22d. During the night patient was delirious, and got out of bed during the absence of the nurse. 27th. The spleen is one inch below the umbilicus. Distinct bulging is noticed and a grazing sound is heard over this region on auscultation. 29th. We find this important note: "A sudden and complete paralysis of the left side with total anesthesia of the left arm was observed this morning. The heart murmur is as previously described." The patient remained in much the same condition from this date, with, however, increasing prostration and frequency of pulse until death occurred on January 10th.

Post-mortem made by Dr. Babcock two hours after death and again under difficulties, the mother having absolutely refused permission for the same, and was indeed in the waiting room during this time. The following hurried notes were taken, but the heart, spleen, sections of the liver and glands, and portions of the intestines are in my possession. The heart is normal in size, large masses of vegetations blocking the mitral orifice.

Several distinct ulcers exist between the outgrowths, one nearly the size of a turkey quill. The masses are grayish-yellow in color. The coronary arteries are free. The spleen weighs one and three-quarter pounds, its pulp is soft; there are three large yellowish infarcts. The liver is much enlarged, pale, swollen, and soft; there is one infarct. The kidneys are somewhat enlarged and congested. The intestines exhibit several distinct cicatrices from recently healed ulcers in the ileum and other portions of the bowels. There are no infarcts.

CASE III.—M. G., a female, married, aged twenty-one years, white, and an American.

Family History.—Her mother died of pneumonia. Her father, three sisters and one brother are in good health.

Previous History.—She has had good health since childhood, with the exception of an attack of measles when ten years of age.

Present History.—In the early part of January, 1900, she was examined and passed by a physician for life insurance. On March 14th she miscarried of twins at about six months. She was out of bed on the 30th. On the following day she could not move on account of pains in her back and legs; these pains have continued more or less ever since. Her physician said this was rheumatism. There was slight but offensive discharge from the uterus. She had sweats at night. This condition of affairs continued with increasing severity for the following six weeks. There were pains in various regions, fever, sweats, and marked loss of strength and weight, so that at the time of my first visit she was extremely emaciated, slightly jaundiced, and so prostrated that she could scarcely make the slightest movement. The expression of countenance as well as the general condition was one of profound sepsis, and at my suggestion she was removed to my ward in the Howard Hospital on the following day.

May 22, 1900. Physical examination: Her lungs are normal. Her spleen extends to two inches below the costal border. The liver is enlarged but to a lesser extent. The heart's apex beat is tumultuous and diffuse. There is no increase of cardiac dulness. A distinct murmur systolic in time is heard at the apex and transmitted to the left. Another systolic murmur is heard over a wide area at the base and is imperfectly transmitted. The temperature is 103°. The pulse 116, respiration 29. The patient complains of a dull pain in the region of the heart and also

of marked dyspnea. Blood examination: Red blood-corpuscles, 3,000,000; white blood-corpuscles, 26,000; hemoglobin, 35 per cent. Widal's reaction is negative. "Streptococci are in blood." The urine is negative as regards albumin and sugar, but gives positive diazo reaction.

The patient remained in the hospital for over six weeks (until July 12th). During this time the fever continued markedly irregular in type, reaching as high as 103.8° and occasionally becoming subnormal. The pulse was rapid and at one time 148, soft, irregular, and compressible. Chilly feelings, followed by drenching sweats, were exhibited and during most of the time her condition seemed a most serious one.

The day following her admission the question of curetting was decided negatively by my colleague, Dr. B. C. Hirst, but on different occasions no less than twenty abscesses, some deeply situated and others comparatively superficial, were opened in different parts of the body, and streptococci were found in the pus. I had at one time, when her condition appeared most desperate, made arrangements to inject some antistreptococcic serum, but found that the supply in the hospital had just been exhausted. The next day a slight improvement was manifest, so that the use of the serum was postponed. During all this time the heart condition was as above stated. About June 22d the improvement became more decided, and she was, at her request, permitted to return home in a fairly good condition on July 12th.

A recent examination (December 20, 1900) shows an increase of weight of twenty-five pounds. The heart reveals some increase in size and both murmurs are still present.

All of the above cases presented points of particular interest. Case I. can be accepted as one of the typhoid type and doubtless due to the poison of measles. This disease must be rare as a causative factor, for the examination of the literature at my command fails to note this relationship, with the following exceptions: James T. Whittaker states that "endocarditis very infrequently occurs in the course of measles, though cases have been noticed by Bouillaud, Stokes and Roger. [These in fact are the only ones I can find on record.] Parrot did not find a single case of any form of endocarditis in 800 cases of measles." Anders mentions it as a possible cause. Even Osler, in his Gulstonian lectures on malignant endocarditis, does not mention the disease.

CASE II.—First, the age of the patient, nine years. Osler tells us that there were only three or four cases under ten years out of his collection of 209 cases. Samuel S. Adams reports a case in a female aged six years, the only one treated in the Children's Hospital, D. C., since its organization in 1870, and after a thorough investigation of the literature on this subject he could only tabulate twenty cases (ten males and ten females) at or under the above age. Secondly, the typhoid fever, which I think was proved to have existed in this case. This disease seems much rarer than I had anticipated. Whittaker states as follows: "Typhoid fever is an infection which is rarely followed by endocarditis, and those cases reported will not bear strict analysis, as in many instances the diagnosis was based upon a bruit which might be otherwise explained." Osler says, in the eruptive fevers grave endocarditis occasionally develops, in typhoid, in scarlet fevers, and in variola; but in the cases I have analyzed these diseases appear of very trivial etiological significance." This case should, I suppose, be included in the simple pyemia group, and yet had it not been for the differential count of the white corpuscles, and perhaps the number of the same, the clinical pictures would be almost typical of a case of splenic lymphatic leukemia. Grawitz states that the highest count of whites in cases of malignant endocarditis has been found to be 44,200, the lowest 10,000. With this leucocytosis there is a decided reduction in the number of red blood-corpuscles. It is worthy of note that although the heart was repeatedly examined no murmur could be detected until late in the disease.

In Case III. the interest consists in the fact that the recovery of the patient may throw a doubt upon the diagnosis. And yet in view of the previous successful examination of the patient for life insurance and the absence of evidence of compensative hypertrophy on the one hand and the positive nature of the symptoms for so long a period of time, as detailed, on the other, as well as the continued existence of a valvular lesion, as recently determined, would make an almost perfect record in favor of the views expressed. Besides which other cases terminating in recovery have been reported by S. S. Adams, C. R. Gorwitz, H. Sainsbury, Leon d'Astros, and others.

The more modern views held regarding the relation existing between simple and malignant endocarditis makes more easy the

acceptance of the foregoing conclusion. For example, Lazarus-Barlow states that the difference between the simple and the malignant forms depends upon the virulence of the micro-organisms or their toxins. They are almost always found in the vegetations on the valves in the infectious, but also frequently found in the so-called simple variety, and the same micro-organisms are found in both. When they act as irritants inflammation results and the case is one of simple endocarditis, but inflammation plus necrosis is septic endocarditis. Weichselbaum (quoted by Adams) claims that there is no essential difference either histologically or bacteriologically between the two forms; that the same species of bacteria are found in both; and that in those cases in which the bacteria have not been found they have either escaped detection or have died. Of his twenty-nine cases he found the micrococcus lanceolatus in seven, the streptococcus in six, the staphylococcus pyogenes aureus in ten; and in six various unusual bacteria, while in eight cases no micro-organisms were found. The most fulminating cases have followed staphylococcus infection. Streptococcus and pneumococcus infection was long drawn out as a rule. Goldschneider, on the other hand, says that pneumococci in the blood always prove a profound infection and an absolutely bad diagnosis. When the ordinary examination of the blood has failed, Sittman's method should be tried. The blood may be taken from the median basilic vein by a sterilized syringe mixed with melted agar, which is immediately plated; large quantities of blood should be used so that the culture contains at least one-third blood. He states that the specific germ found in the blood gives decided evidence of the port of entry of the germ causing specific infection.

Dreschfeld agrees with the foregoing statements and mentions that most observers found but one organism in their cases, but admits that in some instances of infective endocarditis no microbes were found. In most cases the organism found in the diseased valve also invaded the infarcts and metastatic abscesses; those most frequently found were the streptococcus, the staphylococcus, and the pneumococcus. He further states that we may distinguish the following types of infectious endocarditis: (*a*) primary; (*b*) as a complication of septic disease; (*c*) as a complication of pneumonia or meningitis; (*d*) as a mixed infection due to septic organisms secondary to the acute infectious fever, or

secondary to rheumatic endocarditis or sclerotic conditions of the valves.

Adams mentions that a study of the experimental work of Netter, Ribbert, Fränkel and Sänger, Prudden, Weichselbaum, Stern and Hirschler, Viti and others, shows that true endocarditis can be produced in animals by injecting into the veins of any one of the numerous micro-organisms, provided the heart valves are diseased, although Netter and Ribbert think a previous lesion is not essential; and Dreschfeld and others have succeeded in reproducing the disease in animals without previously injuring the valves.

Primary cases are rare. Osler states that it is engrafted upon a pre-existing valvular lesion in 75 per cent. of the cases.

Of the 209 cases in his collection the tricuspid valve was involved in 19 cases, the pulmonary 15, the aortic and mitral together in 41, aortic alone 53, mitral alone 77, the heart walls in 33, and in 9 cases he found the right heart affected alone. "These figures prove the involvement of the right heart out of all proportion to the left-sided disease in the less malignant or other forms of secondary endocarditis." (H. L. Elsner). Out of 802 benign cases from the Munich statistics the right heart alone was affected in 3.24 per cent. In forty-four cases of ulcerative endocarditis the per centage of right-side was 15.91 per cent. (Thayer and Lazear). Dawson Williams claims that when the right side of the heart is attacked it is due to secondary infection. Hall White explains that the specific micro-organism is thus carried by the veins to the right side of the heart.

Emboli occurred in one-fourth of all the cases tabulated by Sperling (quoted by Whittaker), and of these eighty-four cases deposits were found in the kidney fifty-seven times, in the spleen thirty-nine, brain fifteen, liver and alimentary canal five, and skin fourteen.

Osler uses the term malignant instead of ulcerative endocarditis, as these latter may not exist in all cases. Dreschfeld mentions that against the above it may urged that some cases recover; and again that even the verrucose form may sometimes run a rapid or fatal course. He suggests the term infectious or infective. It would seem that the recoveries are sufficiently rare not to invalidate the definition of this first term, and as we believe that even simple endocarditis is infectious, the substitute is even more objectionable.

Since the completion of this article my attention has been called to Litten's report on endocarditis before the German Congress of Internal Medicine. His conclusions are somewhat similar to those that have been presented. His classification is as follows on the basis of etiology: 1. Endocarditis benigna, which includes the following variations: rheumatica, peliotica, choreatica, gonorrhœica, scarlatinosa, morbillosa, variolosa, diphtheritica, typhosa, pneumonica, tuberculosa, influenzæ and traumatica. 2. Endocarditis maligna; this is divided into, e. non-suppurativa, which includes e. rheumatica, e. choreatica, and e. gonorrhœica; and 2, e. suppurativa, septico-pyæmica—primary or secondary in any of the above forms. Benign and malignant gonorrheal endocarditis are caused by the same agent, the gonococcus, the difference being merely one of degree dependent on the virulence of the bacterium.

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A NEW BED SPRING ESPECIALLY ADAPTED TO HOSPITAL AND SICK-ROOM PURPOSES.

BY A. HABERMAAS, M.D.,
Lecturer on Anatomy, Marion Sims-Beaumont College of Medicine, St. Louis, Mo.

Sometime ago my attention was called to an entirely new bed spring devised on the simple principle that a piece of wire when crimped and put on the stretch gives up a certain amount of slack, retaining, however, a certain amount of its original crimp when the tension has been removed. This amount of resiliency contained within the crimp of the wire is utilized as "spring," and by combining such strands of crimped wire a bed spring is obtained which is simple, smooth and pliant, but possesses a wonderful amount of resiliency and strength because of the test to which each strand of wire has been subjected.

The accompanying cut shows the arrangement of the strands of crimped wire and the simplicity of the spring.

FIG. 11.—Surprise Bed Spring.

The arrangement of the crimps transversely gives each strand of wire a certain amount of torsion spring, while the resiliency contained in the longitudinal arrangement of the strands gives the required longitudinal spring. A device for retaining adjacent strands in situ prevents any excess of torsion in the crimps, thereby insuring a smooth surface to the spring, where the body may rest supported without irregular pressure upon any portion, inasmuch as the spring conforms completely to the contour of the body. It is this smooth property of the spring surface,

aided by the great strength and resiliency of a spring deprived of all slack, which I desire to emphasize. Any small thickness of cover, the thickness of one or two ordinary comforts, is sufficient to protect the skin from the contact of the wire, so that a mattress is altogether superfluous.

Mattresses are altogether unhygienic articles of sick-room equipment. Sheets, blankets, quilts, etc., are being constantly changed and cleansed; but the mattress must do service for a prolonged period of time; and yet the mattress is frequently soiled with the excreta of patients.

Since there is no need of the "unhygienic" mattress, the body is close to the resilient spring, and here the real advantages of the bed spring are realized. Only a slight effort is required by the patient or nurse to effect a change of the patient's position; since there is no sagging or forming of pockets in which the patient lies helpless, but the resilient *vis a tergo* is ever ready to assist the patient to a shift of position. The spring and not the mattress conforms to the contour of the body, so that the body pressure is opposed by a resilient surface. This facilitates the many almost imperceptible shiftings of position which the body undergoes during sleep, so that there is no numb member to inform the body on awaking that it was pocketed during the night. Prolonged confinement to bed invariably causes a pocketing of the mattress and a consequent difficulty of changing the position of the body. In time the prolonged pressure bearing upon certain exposed parts, aided by the natural moisture of the parts, produces a maceration of the tissues with pressure necrosis. These so-called bed sores can be absolutely avoided when the body position is frequently changed, as can be readily done with the new bed spring.

No other bed spring possesses these features—smoothness of surface and pliancy coupled with great resiliency and strength. Woven wire springs contain too much slack, with complete loss of resiliency, and consequently soon become little better than hammocks. Spiral springs are rough of surface, with more resiliency than the woven wire spring; they also sag in places subjected to prolonged pressure, because of the imperfect resiliency contained in the individual spirals.

In the new spring, known as the "Surprise Bed Spring," there is smoothness of surface with complete resiliency, thus eliminating the objections offered to other bed springs.

Patients universally dread the bed in summer because of the body heat which the bed clothes absorb and retain. A comfortable mattress soon conforms to the body, and its heat-retaining properties are soon felt. Fever patients should be kept as cool as possible, and any device calculated to favor elimination of heat should be employed if practicable.

Hydrotherapeutic measures, so generally indicated under the circumstances, frequently wet the mattress, rendering them objectionable to the patient. However, where one or two quilts can be substituted for a mattress, as can be done when the Surprise Bed Spring is utilized, no more hesitancy need be had than if a sheet or blanket is wet. Where evacuation of bowels and bladder occurs spontaneously there is no soiled mattress left in the bed as a possible carrier of infection.

In all cases where the necessity of manipulating the patient may arise, as in typhoid fever, puerperal and surgical cases, etc., by the utilization of the new spring we shall advance a great step in the management of our cases, both hygienically and practically.

A practical advantage possessed by this spring, and one calculated to put it in general use, is the fact that it may be utilized for couches or cots as well as beds. Heretofore the spring used for this purpose was the woven wire spring. Because of the "sagging" qualities of this spring the intelligent physician hesitates advocating the use of the cot in any serious illness; and because the spiral spring is not adapted to this use the bed has usually been employed. The strength and resiliency of the Surprise Bed Spring, together with its simplicity and ease of manipulation, make it an ideal spring for a cot or couch. In an aggravated form of typhoid fever in which I recently used such a couch, the comfort derived by the patient when taken out of the hot bed was especially gratifying.

If a mattress is used in connection with this spring its advantages over other springs lie chiefly in its resiliency, which prevents pocketing of the mattress, and in its greater strength and durability. But the fact that an expensive mattress can be dispensed with, and that the spring is less expensive than any other spring on the market, places it within the reach of the poorest household.

ASTHMA.*

BY WM. HENRY, M.D., HARMON, ILL.

Asthma is a disease which comes on at stated times with paroxysmal attacks of dyspnea, usually unattended by cough, but the patient is always hard put-to for breath. The history of the disease may be divided into history of the paroxysms and the general history of the disease. It is not uncommon for the person afflicted to have some premonition of the impending attack. His previous experience makes or gives him an infallible warning. It is more common than not to have some premonitory symptoms of the approach of an attack. These symptoms are generally such as affect the nervous system, causing an unusual buoyancy of spirits and mental excitement or depression, lethargy and an irrestible sleepiness; generally a great amount of light pale-colored urine, like well or spring water, as in cases of hysteria. Sometimes there are no premonitory symptoms to guide the asthmatic. They may go to bed in their usual health, and between one and two o'clock in the morning wake up with an asthmatic attack full upon them.

The initiatory symptoms are a slight attack of oppression across the chest, a short dry cough, a tendency to wheeze, and an indisposition to exertion; his shoulders are higher than usual, the patient complains of flatulence, which makes the girth around the epigastrium greater than usual. In some cases complaint is made of gas in the stomach, and it materially helps the oppression in breathing; the patients think that if they could get the wind from the stomach that they would feel better. In some cases the lungs seem to fill with moist rales and in others dry rales; thus the terms dry and wet asthma.

There is no disease that is more uniform as to time of appearance than that of asthma. Nine times out of ten it comes between two and four o'clock in the morning. Each patient has his usual time; one will be awakened at two, another at three, and a third at four o'clock. There is one very peculiar feature of the disease: one cannot sleep down-stairs. If he does he is sure to have an attack. If another sleeps up-stairs he is sure of an attack. These patients cannot bear the least particle of dust in the room. If there is it is sure to make them worse. An-

* Written to be read at the Rock River Medical Association.

other curious feature of the disease is, if one person subject to asthma stays at the seashore he will never have the disease. If another one is away from the seashore he will never have an attack, but let him go there and he will have it all of the time; he cannot live there. Some may go to high, dry altitudes and never have the disease; others require a moist atmosphere to be free from the disease. There are other peculiar features about asthma. Some cannot go near a horse or a cow, dog or cat, unless they have an attack of the disease. Some persons are very sensitive to drugs or plants of some kinds. I knew a physician who could not work with powdered ipecac; if he did he would have an attack of asthma in a violent form of the dry variety.

During a paroxysm the person affected leans across a chair, table or bedstead with his mouth wide open to get his breath. If he is very bad he may be pale or dusky in appearance, the extremities may be cold, yet he perspires profusely from the violence of the respiratory effort. The shoulders are elevated, the head thrown back, and the mouth opened wide at each inspiration in order to get air enough into the lungs to sustain life. He wants his clothes loosened about the neck and chest. It seems to him as though he were bound with a band of iron and had not room enough to give full expansion to his lungs. If the respiratory gurgle is listened to during a severe attack there will be many discordant sounds—squeaking, mewing, snoring sounds all at the same time. The rales of asthma are usually of a dry character, but at times they are moist where bronchitis is connected with it. Not unfrequently the physical signs of asthma above described are partial in their distribution. The rales are patchy; are not heard in every part of the lungs at the same time. The physical signs of the lungs change their location very rapidly in asthma. Some writers think that asthma is purely a nervous disease; they think the trouble is with the phrenic nerve that supplies the lung tissue. Others claim that its origin is in the brain and spinal cord. Whenever we sit and look at a patient with an asthmatic attack it seems as though the stomach and diaphragm had considerable to do with the case. The question in my mind: Why, as a rule, should it come in the night, always after the middle? Does the atmosphere have anything to do with it that caused this spasmodic condition of the pulmonary organs? The air cells seem close,

either spasmodically or with mucus. The nerves seem to do their part in causing the trouble. Some of those afflicted have said if they could only throw up the phlegm that they would soon be relieved from their hard breathing. When the phlegm does come up it is a frothy, white mucus, but does not always give relief. By which the length of time a paroxysm may be measured there is no rule. Sometimes it will be over in an hour or two; again it may last several hours, even days, before it entirely ceases. The age at which asthma attacks a patient varies. Salter claims that he has seen the disease in infants as early as fourteen to twenty-eight days. The earliest age at which Politzer has seen the disease is ten and fifteen months. Saltman believes that some of Salter's cases were really thymic and bronchial asthma. As to sex, they are about equal. One writer says that men are more liable than women, two to one. The diagnosis of asthma is not as easy as some might think. It may be confounded with dyspnea from bronchitis or emphysema or heart disease. It may be distinguished from bronchitis by its sudden appearance and as sudden departure. From emphysema it may be distinguished by the paroxysmal character of the dyspnea. The dyspnea that asthma is most liable to be confounded with is heart disease; both are intense and occur in the night. The prognosis is grave when the spells seem to increase or get worse every time they come, yet the mortality is not great. The writer does not remember of seeing a case where a death occurred which was purely asthmatic. The treatment of asthma is as varied as any disease known. The whole materia medica has been searched to find a sure cure.

There are many things that will relieve. Depressants, stimulants and narcotics have been used for immediate relief. Tobacco has good effect in some cases. Nitre paper burned (the fumes) give relief. Stramonium leaves dried and burned and the fumes inhaled give relief. Lobelia, morphia, conium have been used with more or less success. Hyoscyamus, chloroform, ether and sal ammoniac have also been used and have had their adherents; but none of these have made a permanent cure. To avoid many things which have a tendency to excite the disease or bring on a paroxysm is a great help toward a cure.

Change of climate often produces a cure, even from one part of a state to another. Colorado is a good place for asthmatic

patients to go; the atmosphere is rare and dry. There have been many sent there who never had an attack of the disease while they remained in that climate. I believe that many of these cases have a peculiar idiosyncracy and are easily affected in almost any latitude.

The American Electro-Therapeutic Association will hold its eleventh annual meeting at Buffalo, Tuesday, Wednesday and Thursday, September 24, 25 and 26, 1901, under the presidency of Dr. Ernest Wende of Buffalo. The meetings will be held at the Armory of the Seventy-fourth Regiment, and the headquarters of the association will be established at the Niagara Hotel, where rates for rooms are $2.00 and upwards a day for one person, and members are advised to secure their rooms without delay. Dr. Henry R. Hopkins, 433 Franklin Street, Buffalo, is chairman of the committee on arrangements, and he should be addressed concerning information desired with reference to the meeting.

The Medical Society of the Missouri Valley will hold its fourteenth annual meeting in St. Joseph on Thursday, September 19, and Eureka Springs, September 20 and 21. The 'Frisco Railroad will carry members and their ladies free from Kansas City to Eureka and return. One fare for the round trip ($1.90) has been secured from St. Joseph to Kansas City. Pullman fare will be $1.00 each way, $2.00 for double berth, which must be remitted to the secretary before September 1st, in order that extra cars may be provided for the party. A daylight ride on the return trip may yet be arranged if a majority prefer it.

One day's scientific session will be held in each city, and the last day will be devoted to sight-seeing at the Springs. In the evening a reception will be tendered the association by the local profession and Commercial Club. A delightful outing is promised, and it is to be hoped that every member will take his wife, daughter, sweetheart or sister, as the case may be.

COMPARATIVE TREATMENT OF GONORRHEA.

BY L. MIDY, PHARMICIEN DE 1re CLASSE, PARIS, FRANCE.

The various pathogenic bacteria, which are capable of producing disease, are of two varieties, the bacilli and micrococci. The latter are known as pus formers or bacteria, producing suppuration. Amongst them are the three different staphylococci, three different streptococci and the diplococci. To the latter class belongs the gonococcus of Neisser.

FIG. 12.—Gonococcus of Neisser, from pus of a gonorrheal patient before treatment.

The peculiar feature of this coccus is its biscuit shape, small and flat, in pairs, has no flagellæ and is motionless. It is found within pus cells or attached to epithelium. It does not grow in the ordinary culture media, but requires a special medium for its cultivation. If inoculated into the peritoneal cavity of animals, it gives rise to suppuration.

All urethral inflammations are not caused by the gonococcus, and even in true gonorrhea all of the inflammatory symptoms do not depend upon the gonococcus, as the epithelial denudation following the disease permits the entrance of the common pus cocci of the urethra into the peri-urethral tissues.

The peri-urethral abscesses and salpingitis, etc., not infrequently depend upon the ordinary pus cocci, and cases of gonorrhea with double orchitis and general septic infection with endocarditis have happened in which the gonococcus played no rôle in the sepsis, which was found to be caused by a large dumb-bell coccus, which stained beautifully by Gram's method. Hence the difficulty of making a positive diagnosis of urethritis attributable to the gonococcus.

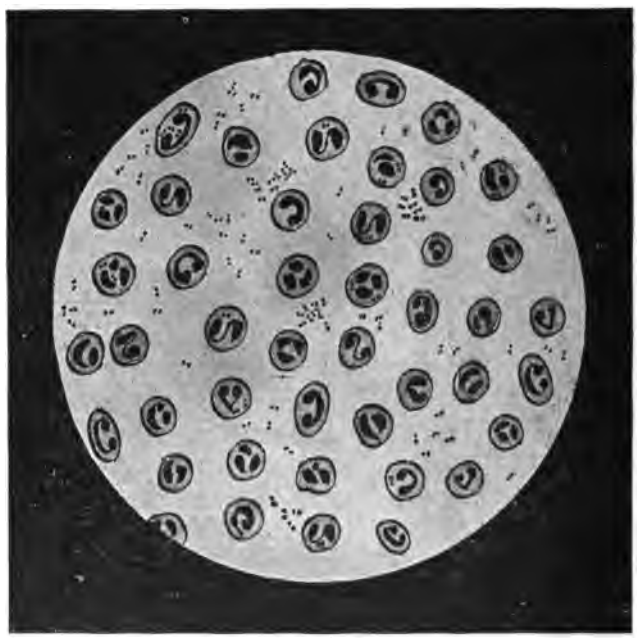

FIG. 13.—Urethrococcus (magnified 1500 times), common pus cocci of the urethra.

Urethritis may be due to diathetic conditions, to chronic urethral discharges, to morbid states of the urine (cystitis), to sexual abuses, to dietetic excesses and irregularities, or alcoholism. In urethritis the inflammation is generally most marked in the anterior portion of the canal, but in the severe types it involves the entire canal down to the bulbo membranous junction or extends to the posterior urethra. The infection may extend from the meatus to the bladder. The treatment of urethritis comprises many methods, but it is seldom treated upon sound and rational therapeutic principles. The abortive treatment frequently resorted to has often led to serious consequences and is frequently

employed by the patient prior to consulting a physician, while the rational or methodical treatment is seldom applied until urethritis is well established. In metritis, Neisser's gonococcus is capable of penetrating the muscular tissue from the endometrium and there causing inflammation which may proceed to the formation of abscesses. The gonococci may remain for years in mucosæ, but the uterine muscular tissue is not a favorable soil for their propagation. Physical and sexual rest are the first impor-

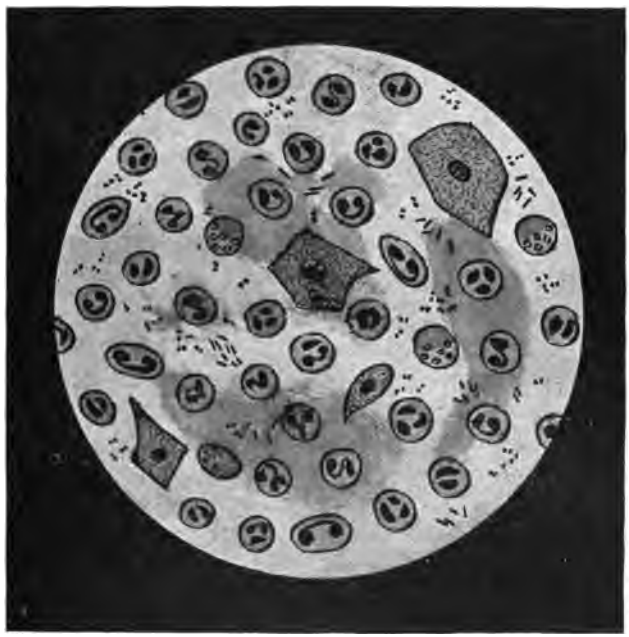

FIG. 14.—Case A (magnified 1500 times), showing results of one week's treatment with irrigation and permanganate injections.

tant principles, after which come regulation of diet and internal medication. Sandal wood oil is successfully used in gonorrhea and inflammatory diseases of the mucous membranes due to pus formation, but aside from this little is known of its physiological action. The best sandal wood oil is that made by Midy's process from Mysore wood, on account of its rapid and continuous resorption into the blood. Gonococci have also been found in acute joint inflammations (gonorrheal arthritis), which is frequently followed by ankylosis, and the early and continued use of Santal Midy will prevent such sequelæ.

Reliable data derived from continuous urine examination of

three gonorrhea patients under professional observation, placed upon the same diet, rest, etc., but under three distinct methods of treatment, will serve to illustrate the anti-bacterial properties of sandal wood oil, as compared with local treatment and other anti-gonorrheal remedies.

CASE A.—Age 36, gonorrhea (microscopically demonstrated), eight days' standing. Discharge thick purulent; pain near meatus upon urinating. Examination of urine reveals: spec.

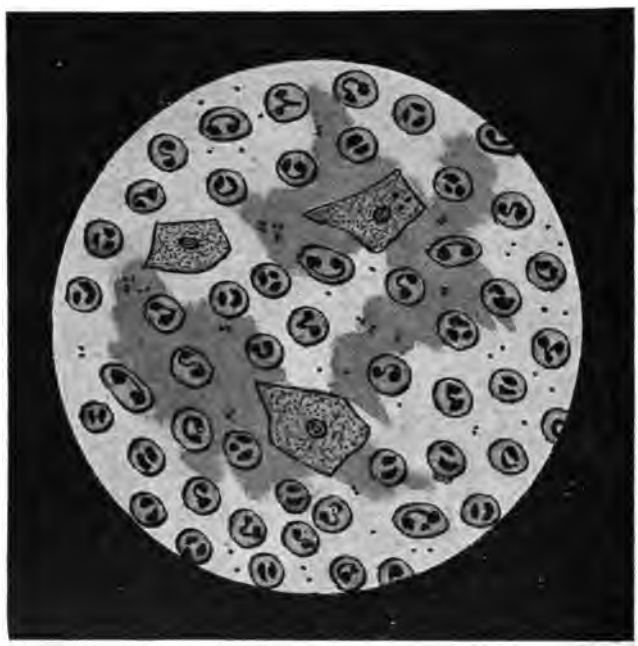

FIG. 15.—Case B (magnified 1500 times), showing results of one week's treatment by irrigation, injections of nitrate of silver and alkaline diluents with copaiba and cubebs.

grav., 1016; react., alkaline; trace of nucleo-albumin, no sugar or bile. Excess of earthy phosphates, pus cells, triple phosphates, squamous epithelium, gonococcus, micrococcus ureæ. Treatment: Irrigation twice weekly and injection t. i. d. with one in four thousand sol. potass. permang. One week from beginning of treatment, no changes excepting decrease of pus cells, discharge watery, gonococcus still present.

CASE B.—Age 27, gonorrhea (microscopically demonstrated), seven days' standing. Discharge thick greenish, pain when urinating. Examination of urine reveals: sp. grav., 1016; re-

action, slightly acid; no sugar, albumen or bile, few uric acid crystals, squamous epithelium, pus cells, few leucocytes, gonococcus, urethrococcus. Treatment: irrigation twice weekly and injection morning and night of one per cent. sol. argent. nitr., also alkaline diluents, copaiba and cubebs. One week from beginning of treatment, general condition improved; there still remains, however, a continuous watery discharge from urethra. Microscopically, micrococcus ureæ; streptococcus still present.

FIG. 16.—Case C (magnified 1500 times), showing results after one week's treatment with Santal-Midy only.

CASE C.—Age 29, gonorrhea (microscopically demonstrated), ten days' standing. Has been using injections; purulent greenish discharge from urethra, severe pain while urinating. Urine examination reveals: spec. grav., 1018; reaction, neutral; no albumen, sugar or bile; earthy and triple phosphates, squamous epithelium from the bladder and urethra, pus cells and few eosinophiles, gonococcus, micrococcus ureæ, streptococcus. Treatment: two capsules of Santal Midy every two hours. One week from beginning of treatment patient feels well, has had no digestive disturbances. No discharge from urethra excepting upon

forced pressure a small watery drop, which under microscope exhibits flat epithelium, earthy phosphates, and a few micrococci ureæ. A series of experimentations on these lines gave like results and led to the following deductions regarding the physiological action of Santal Midy. This drug appears to act as an internal antiseptic and as an astringent to mucous surfaces, checking secretions. It is excreted by the kidneys and imparts an odor to the urine, giving the latter medicinal qualities, thus acting upon the urinary passages. It is rapidly absorbed and eliminated, which is proven by its detection in the urine one-half hour after its administration. Part of the Santal Midy escapes by the broncho-pulmonary mucous menbrane, where it exerts excellent local effects in chronic bronchitis.

Essential oil of sandal has been severely tested by Henderson of Glasgow, Posner of Berlin, and in France by Dr. Panas of the Hôtel Dieu Hospital, Professor Gubler, Dr. Simonnet and others, in all cases where copaiba and cubebs are generally prescribed.

The objections to copaiba and cubebs are obvious, especially in the usually strong doses necessary under the circumstances; they give rise to repulsive eructations, gastro-intestinal disturbances, vomiting, indigestion, diarrhea, and besides the urine and breath are loaded with disagreeable and characteristic exhalations, and the body frequently becomes covered with eruption. Henderson asserts that he always found *pure* sandal oil inoffensive even in large doses, and that at the expiration of forty-eight hours great relief is effected. Besides it has the important qualification of pleasing the patient and being agreeable to the stomach.

In a communication to the Paris Medical Society, Dr. Panas also advocated its use. "*Pure* essential oil of sandal modifies the inflammatory symptoms of gonorrhea in a very striking and rapid manner, by removing the scalding in the urethra in a short space of time, varying from one to three days; its most remarkable action, however, is that which it exerts on the discharge, the nature of which is changed in the course of twenty-four to forty-eight hours at the utmost, becoming first reduced to a species of intermittent serous dripping, which is diminished to a few drops of whitish muco-pus and then totally disappearing, whatever may have been the color and abundance of the secretion before the treatment."

NO THIEVES IN GERMANY!—A PIECE OF INTERNATIONAL MEDICAL HISTORY.

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

The following clipping is from the *New York Sun:*

BREMEN CHIEF PRAISES HIS POLICE.

NO CORRUPTION THERE, NO BLACKMAIL, NO PICKPOCKETS—A FEW FORGERS.

Arthur Carl, Chief of Police of Bremen, arrived yesterday from that port aboard the North German Lloyd steamship Lahn, with a roseate account of the way his municipality is run. He said:

"Such a thing as police corruption is unknown in Bremen or in any other city in Germany. All the members of the Bremen force are graduates from the army. Certain resorts are licensed and the fees go into the treasury. Thus there can be no blackmail. Forgers and counterfeiters are our chief criminals. The pickpocket is unknown. There are fewer crooks to the population in Germany than in any other country."

I beg to differ from this opinion of the German Chief of Police. There are as many thieves in Berlin as there are *liars* in Denmark. The medical subjects of His Hohenzollen Majesty and even his Minister of State are not only lacking in international courtesy to Americans, but also in the simplest professional honesty. Here is my little tale of woe which proves this:

On August 21, 1896, after Dr. Goldschmidt and myself had worked since December, 1895, to stimulate international interest in a leper congress, I wrote the following letter to the German Emperor:

"SIRE:—I take the liberty of humbly addressing your Majesty in behalf of an enterprise which cannot fail to appeal to your sympathy. It is proposed to hold a congress of leprologists and delegates from all civilized countries—one from each—for the suppression and prevention of leprosy. The delegates of the various countries will form a permanent international committee, to meet once a year, to which all questions relating to leprosy will be submitted. This committee will raise a fund for the support of leper asylums, and the sending of specialists to those points where their services are needed. The provisional committee of the congress consists of Dr. G. Armauer Hansen, of Bergen, Norway; Dr. Goldschmidt, late of the Island of Madeira, now of Paris; and Dr. Albert S. Ashmead of New York. The Norwegian

government is willing to issue the call for the congress to meet in Berlin next year, provided it has assurances of the sympathy of other governments. It is to obtain such an assurance that we appeal to Your Majesty. The international committee is the central and essential part of this philanthropic scheme, because its members will represent each the government of one civilized country. The leprologists who will attend, either as individuals or as representatives of societies, may discuss questions of bacteriology, pathology and cure; but it must, of course, be reserved for the delegates of the governments to formulate laws for the isolation of lepers, etc.

"Will it please Your Majesty to let our committee be informed whether the Imperial Government of Germany is willing to send a delegate to represent it at the congress?

"I am of Your Majesty the most humble and devoted servant,

ALBERT S. ASHMEAD, M.D."

This was sent to the United States Minister at Berlin with the following letter:

"I enclose a petition to the German Emperor in behalf of a movement for the suppression and prevention of leprosy. Will you have the kindness, after perusing it, to transmit it through the proper channel and use your influence to obtain a favorable answer?"

On March 22, 1897, I received the following reply:

"IMPERIAL GERMAN EMBASSY,
WASHINGTON, D. C.

SIR:—In reply to the letter you addressed to His Majesty, the Emperor of Germany, under date of August 21, 1896, I am instructed to advise you that the Imperial Government does not intend to be represented at the congress of leprologists to be held at Bergen, Norway, a similar congress (international) going to be convoked to Berlin for the 9th of October next.

Yours very truly,

[Signed] BARON THIELMANN,
Ambassador of Germany."

I also wrote August 22, 1896, as follows to Professor Virchow:

"I address you as a member of the provisional committee of a proposed congress of leprologists and delegates from all civilized countries for the suppression and prevention of leprosy. Dr. G.

Armauer Hansen, inspector-general for leprosy in Norway; Dr. Jules Goldschmidt, who was twenty-six years medical superintendent of the Funchal Asylum, Madeira, are the other members of the provisional committee. Bergen, Norway (on Hansen's wish), will probably be the seat of this congress, out of compliment to Hansen. The Norwegian government is willing to issue the call and father the enterprise, provided it has assurances of sympathy from other governments. The American, English, Mexican, Japanese and Chinese governments and all the republics of South America have been appealed to. Hawaii has already notified us of its acceptance. I shall by this mail appeal to your government.

"It is proposed that the delegates from each civilized country shall form a permanent international committee, to which all questions relating to leprosy may be submitted. A fund will be raised for the maintenance of leper asylums in countries where they are lacking, or not in sufficient number, for the sending of specialists, and for assistance to be given to non-supporting asylums. The committee will probably meet once a year.

"May we ask you to use your great influence to obtain for us from the German government an expression of sympathy with a philanthropic work of such tremendous importance, and an assurance of its willingness to appoint a delegate to represent Germany in our proposed international committee? May we also depend upon the co-operation of your *Archives* to proclaim and commend our work? In expectation of a favorable answer,

Yours truly, ALBERT S. ASHMEAD, M.D."

I sent it to Prof. D. G. Brinton of Philadelphia, with this letter:

"DEAR DR. BRINTON:—You will find enclosed a letter to Dr. Virchow, which I leave open, so that you may read it. Will you transmit it to him, as I have not his address. I know that you are his intimate friend."

And Dr. Brinton replied:

"DEAR DR. ASHMEAD:—I have received and forwarded your letter to Dr. Virchow, adding a word of my own in favor of the plan."

No answer was ever received by me from Dr. Virchow.

Under date of September 18, 1896, Dr. Ehlers wrote me: "I have had great pleasure in receiving to-day your letter, because I am working on the same subject since the last congress in London,

in August, 1896. * * * I am going to Berlin one of the first days in October to find several other leprologists of our union. I shall inform you of our deliberations." (In August, 1896, the Goldschmidt-Ashmead invitation to governments had been sent out. All our preliminary work was done from December, 1895, to August, 1896)

In reply I wrote: "I have received your letter, and I am very thankful of your kindness of last month in forwarding mine to the King of Denmark. I sent you a copy of a letter I wrote to the Baroness Burdett-Coutts, who is the richest woman in England, known for her great charities, and a relative of mine by marriage. If she will take hold of the enterprise we have nothing to fear. I do not know whether I sent you also a copy of another message to the Princess Mary of Cambridge, Duchess of Teck, who is said to be at the head of every benevolent movement in England. You know as well as I do that the British Empire has the greatest number of lepers of any country of the world, and to make a great effort on any other government before we have tried what we can obtain from the most powerful government of the world, and at the same time the most interested in our scheme, would be sheer foolishness. If the English are not with it, we cannot hope for victory. In England I look to the Queen, the Baroness Burdett-Coutts, the Princess Mary, probably the Princess of Wales, the whole womanhood of England, and am sure that all these elements must be sufficient to help us to victory."

The following letter was sent by Dr. Ehlers to Dr. Goldschmidt:

"Nov 16, 1896.

"You write me that Dr. Armauer Hansen has approved the project of Dr. Ashmead. I can assure you of the contrary. The truth is that Dr. Ashmead has acted without authorization of the Norwegian government, and even without the formal authorization of Dr. Hansen, as you may see by his signature under our invitation; and as to the European and American powers who had promised Dr. Ashmead their support, I believe again that there must be a mistake.

"It is not, in my opinion, the way which leads to the goal that we have proposed to ourselves to try to stir up the governments. The governments have always neglected the holy name of hygiene in all countries and in all times. We do not want to make a congress of leprology; it is a conference which takes place be-

tween known leprologists. The governments are only invited to send delegates, but these delegates are not to have in the conference a special position.

"It is seldom the delegates of governments who are able to do anything. Suppose that one finds oneself in a conference composed of anti-contagionist delegates. What are we to decide then? Our idea with the conference is also of ancient date, and has been carried into operation at the congress of London (six months after the Goldschmidt-Ashmead enterprise).

"It is not a congress at Bogota, or at Bergen, or at London, as Dr. Ashmead would like, that we want it; it is a *conference* in Berlin between renowned leprologists, capable of discussing a good cause, and bring it to a happy ending.

"One does in no way make opposition to the project of Dr. Ashmead, whose manner of thinking one does not share. We shall not stir up the ladies of the Red Cross, for the Red Cross has nothing to do with clinical conferences.

"One does not care much for the Hawaiian government, which has treated in an ignoble manner our celebrated confrère Arning. We want to act with the help of competent colleagues whose works we know."

Here is a letter of Dr. Hansen's, dated August 9, 1896 (*before* the congress of London, where Ehlers conceived his project.)

"DEAR DR. ASHMEAD:—I have forwarded your correspondence with Dr. Goldschmidt to the chief of our medical service (Dr. Holmboe), and from him I have received a reply, of wh'ch the main contents are the following:

"He thinks that the best place for the meeting of the congress would be Bergen, in Norway, where we have the headquarters (ah!) of the story of leprosy. Further, he wishes to have beforehand certainty, for that our invitation from Norway to meet in Bergen should be accepted by the most prominent physicians acquainted with leprosy. Now I think myself that this should be a good arrangement, as we hardly have anything to learn from foreigners (oh!), while we are able of giving good information.

"No doubt our chief (Dr. Holmboe) would recommend the sending of a man from Norway if the congress should meet in another place; but as Norway occupies a prominent place in the treatment of leprosy (by shipment to America!) I should think it the most convenient place of meeting.

"I beg you kindly to give me your opinion on this point, so that the matter, as soon as possible, can be laid before the Norwegian government."

Again, on August 18, 1896, he wrote as follows:

"I must say that I completely agree with Dr. Goldschmidt in taking Moscow as meeting place of congress. You may, therefore, leave out the passage concerning my wish of having the congress to meet in Bergen (from the provisional committee's invitation to leprologists, to which Hansen's name with his permission was signed, a copy of which had been forwarded to him).

"What the government international committee belongs, this will be a matter of discussion. I myself, I confess, have no clear idea of what such a committee shall or can do of good work."

November 1, 1896, he writes thus:

"Your letter of September 18th I sent to the Norwegian government to get its decision if it would convoke the congress. Yesterday I received its decision that the government does not find it convenient to convoke the said congress, but that it will send me to take part in the 'conferenz' of leprologists in Berlin. In consequence I beg you to leave my name off of your arrangements and publishings as to the congress" (which he had permitted up to this time).

On December 6, 1896, I wrote to Dr. Ehlers:

"I have just received a letter from Dr. Goldschmidt, in which I find a statement of yours to the effect that Armauer Hansen never accepted an invitation of mine to be a member of our provisional committee. I send you the following quotations from Dr. Hansen's letter to me (in which he said 'you may use my name, etc.'). If you have made the same mistatement anywhere else I ask you, as a gentleman, to correct it."

Here is Dr. Goldschmidt's letter:

"4 RUE DANNAN, PARIS, Nov. 26, 1896.

"DEAR DR. ASHMEAD:—In reply to a letter which I sent to Dr. Ehlers, and in which I expressed my astonishment that Armauer Hansen had put his signature to the 'Einladung,' I received a lengthy answer from Ehlers. He says that Armauer Hansen never accepted an invitation of yours for a membership on a committee, nor does Ehlers seem to know that the first idea of a leprological congress emanated from us.

"He finds all the good work done by you impracticable, and insists upon a Berlin congress. He repudiates the idea of having government delegates. In short, he insists upon the entire programme indicated in the 'Einladung,' which most certainly has reached you by this time. I shall answer to his letter, but at the same time I thought it right to inform you."

Prof. O. Petersen, Inspector-General of Leprosy for Russia, under date December 21, 1896, wrote me as follows:

(Translated From French.)

"VERY HONORED COLLEAGUE:—I thank you for your pleasant letter and for your proposition, which is reported to me by your colleague, Goldschmidt.

"Be assured that the question of leprosy interests me infinitely, and that all that can better the condition of those unfortunates will always find my support.

"A special congress during the International Congress in Moscow appealed very much to me.

"But I have just heard that our illustrious colleagues, Hansen, Koch, and Lassar, have received the consent of the German government to invite delegates from all countries for an *official* (italics his) conference in Berlin. I believe that a congress of delegates will be able to obtain more results than a general *conference* (italics mine) in Moscow, during an International Congress, which takes away from us repose and gives us discussion concerning questions which are already clear.

"Thus I have decided to attend the conference in Berlin as an official delegate of the Russian government, and I advise that you and Dr. Goldschmidt should do the same. Your project was very sympathetic to me, but better is better.

"If, nevertheless, you stick to your own project, I regret to have to say that I am not able to attend.

"Please agree the expression of my respects, etc.

"Yours, PROF. PETERSEN."

I wrote to Goldschmidt then as follows:

"I have received a letter, dated December 21, from Petersen. He says that Hansen, Koch and Lassar (he does not mention Ehlers) have obtained from the German government the authorization to invite delegates from other governments to an official conference in Berlin. He will attend for the Russian government. What shall we do under the present circumstances?

They have taken the wind out of our sails by adopting our delegate idea. I shall write and do nothing until I have heard from you "

Here is my reply to Dr. Petersen:

"MONSIEUR ET CHER COLLEGUE:

"Je vois avec plaisir que nos illustres collègues ont adoptés le plan pour laquelle Doct. Goldschmidt et moi, nous avons combattus dès le principe; c'est-a-dire la nécessité d'avoir des délégués officiels des différents gouvernments. Nous avons toujours opposés la convocation d'un congrès exclusivement composé de simples leprologistes, c'est-a-dire d'une assemblée ou il y aurait eu beaucoup de paroles, beaucoup de vent *pretereaque nihil.* Il nous importe peu que nos illustres collègues se soient emparés de nos ideés, et qu'ils aient résolus de convoquer le congrès, dont l'idée a été, pour la première fois suggerée par Dr. Goldschmidt, a Berlin, quand il etait généralement supposé qu'il aurait lieu à Moscow.

"Vous remerciant, Monsieur le docteur, des sympathies que vous m'avez exprimées je vous prie d'agréer mes sentiments les plus distingués. DR. ASHMEAD."

And here is one to Lassar:

"DEAR DR. LASSAR:—Will you kindly send me a programme of the leper conference. Dr. Ehlers omitted to send me one. Dr. Munro of London, tells me that he has not been remembered either. Perhaps it is to be an European affair exclusively.

ALBERT S. ASHMEAD."

The following letters will explain themselves:

Goldschmidt to Ashmead: "Enclosed is an 'invitation' which has highly astonished me. I have at once written to Dr. Ehlers for an explanation, especially as I found Dr. Armauer Hansen's name signed. His action is inexplicable. I was just working out a circular when I got this one. As soon as I hear from Copenhagen I shall write again."

Goldschmidt to Ashmead: "Thanks for the copy of your letter to Lassar. I had got the same circular about Madeira leprosy, and had not answered it, but now I shall follow your example and give them 'a bit of my mind.' Once before I had to remonstrate with Prof. Lassar, who, without ever mentioning me, had published my proposals."

Goldschmidt to Ashmead: "You most likely have got the printed invitation to the leper conference. Amongst the 'themata' you will see Madeira, coupled with my name, mentioned. I miss yours, and I wonder: have you refused to take part? I am not yet decided about going to Berlin.

"Lassar wrote me a letter saying he was glad that the difference with Ehlers was explained and put off. I owe them *all* a grudge, and if I was to attend the conference I should not abstain from giving the history of this meeting and the way they have taken our ideas and never mentioned our names."

Goldschmidt to Ashmead: "I am in receipt of yours of the 16th of April, and mark with great pleasure that you will attend the Berlin leper conference. The leaders of this conference are obviously determined never to let the public know that *we* already had arranged for a better defined aim, in a better planned way, a leprosy congress. I told Lassar that it was for me quite a new era to see scientific men go into competition to attract the notice of the great public; that we shall show the most unselfish, conciliatory spirit by giving up our plans and let them work out their own; but that I did not like to qualify the conduct of those who organized this conference without first appealing to us or of possibly amalgamating themselves with us. To this Lassar answered he was exceedingly glad that we did not wish to make opposition to the conference, and that he was glad to make my personal acquaintance! A very easy way to skip difficulties! Will I rely upon 'the Yankee bugbear' to tell those over-refined European societies what is right and what is true? I think it will be good to give the history of the conference in one of the leading medical papers."

Ashmead to Goldschmidt: "Among the geographical names on the programme, Ehlers has taken hold of many of my correspondents—Kerr of China, for instance. I do not think that he had any previous communication from them; he took their names from my list. They are even now in correspondence with me, and they certainly would have told me if anything had passed between themselves and Ehlers. I shall distribute next week a copy of a good deal of correspondence, which will show that although my name is not on the programme, yet I have not been an absolute zero in this affair. Will you kindly send me your programme for the leper conference; Ehlers did not send me one.

In my opinion it is not advisable to make any move until definite word has been received from Petersen. Ehlers evidently is very angry. He returned me through the mail my last letter in which I criticized the Berlin meeting. It was *'refusé,' though he had opened the envelope* and kept the letter a few days. I may say, like you: What do you think of this behavior?"

Goldschmidt to Ashmead, December 31, 1896: "I wish to send this last day of the year my sincerest friendliness, wishes for the new one. A week ago I wished to write to you, but I waited for an answer from Dr. Petersen (St. Petersburg). Unfortunately, it never came, notwithstanding my having written twice to him. What do you think of this behavior? I told Dr. Petersen to take the presidency of the congress, to prepare the work, and to send invitations to all concerned. I offered him your invitation; in fact, I left him all the honors of the congress. We must have some leading men in Russia to convoke the congress and to prepare a local committee. I myself am too overwhelmed presently and cannot take it upon me to prepare the congress. Please write yourself to Petersen and take it into your own hands. Having already sent the declaration, you are the fittest person.

"Petersen seems to behave like Armauer Hansen. I say 'seems' and hope to be wrong."

Goldschmidt to Ashmead, January 14, 1897: "At last I got the enclosed answer to my two letters from Prof. Petersen, St. Petersburg. You will see by it that he has no intention to sign an appeal for an international congress, and that he prefers to go to Berlin, notwithstanding that it would be easier for him to attend a Moscow assembly. He does not say anything about his taking a place in a leprosy congress. I had offered him the presidency of it. Under such circumstances I am exceedingly sorry to say that the bulk or even the totality of leprologists prefer to go to Berlin. This puts a stop to our project. Henceforth I shall endeavor in Berlin (if I am going there) to reform the congress with prominent deputies as we had proposed. I am sorry you had such trouble for such a result—however we meant well."

Ashmead to Goldschmidt, January 26, 1897: "I return you Prof. Petersen's letter. Has'nt it struck you as very strange that he should attribute to the Berlin men the idea of the *official delegates?* Well; and you, or may I say we, what becomes of us? Prof Petersen really expresses a wish and a hope that you will

look favorably to the *delegate scheme.* Well, I hope you will, and I will do my best not to hate that 'new' idea."

Letter from Baron Thielman, Ambassador of Germany, to Dr. Ashmead, dated May 21, 1897:

"Referring to a letter of March 22nd last, I have the honor to enclose a programme of the international conference of leprologists, to be held in Berlin, Germany, from October 11th to 16th next. You will oblige me by stating its receipt."

From the official report of Dr. Kinyoun of U. S. Marine Hospital Service, official delegate of the United States to the Berlin leper congress:

"The conference was formally opened by the Cultus Minister, the Minister of the Interior, and the Secretary of State for Russia, who gave a cordial welcome in behalf of the government to the delegates and members. The objects of the conference were fully explained by Professors Virchow and Lassar for the committee on organization, and Dr. von Kohler for the imperial board of health.

"The following countries sent official delegates: Austria, Hungary, Belgium, Denmark, Greece, Germany (all the States), Portugal, Russia, Turkey, Roumania, United States of America, United States of Colombia, Holland, Hawaiian Republic, Japan, Italy, Norway, Sweden, Switzerland, and Servia."

(Translated from the French.)

"ST. PETERSBURG, December 20, 1896.

DR. J. GOLDSCHMIDT, Paris, France.

Very Honored Colleague—My best thanks for your kindly lines, which unfortunately I have not been able to answer through being overburdened with work. The project of colleague Ashmead is known to me only in a general way. I know nothing as to the particulars. The idea of special international debate at the Moscow Congress was very sympathetic to me. But as I now learn that colleagues Koch, Hansen and Lassar (he does not mention Ehlers) have resolved to have the call issued *by their government*, and to have a special conference of specialists, as delegates of the governments, it seems to me to be more practical to join this scheme, as we can thus obtain more than by discussions *void of all official character*, and I suppose you are also of that opinion. Dr. Ashmead is unknown to me personally; perhaps

you know him better. I cannot say how far it is within his power to influence governments in regard to this sending of delegates. It is much to be regretted that you and Dr. Ashmead were not in London last summer, where there were representatives of dermatology of so many countries, with whom you might have personally debated on this subject.

"Under these circumstances I hope that you will advise colleague Ashmead to join the Berlin conference.

Yours, etc., PROF. PETERSEN."

And now I repeat what I published in my pamphlet *Ehleriana*, a copy of which was sent to all leprologists.

Le vol que vous avez commis!

From Dr. Goldschmidt of Paris, you attempted to steal, did steal, but was forced to disgorge by the publication of my pamphlet in the *Magazine af Medicine*, of Atlanta, all the honor of having originated the idea of an international congress for the suppression and prevention of leprosy. Je vous prie simplement de rectifier ce vol!

You stole from Dr. Goldschmidt and me the names of many of your geographical men, as published in your invitation and programme to your debate in Berlin; men with whom we had been in correspondence, as is shown by my pamphlet published by the *Magazine of Medicine*, and you pretended that you had secured their attachment to *your* congress when you had no previous correspondence with any of them. Here are some names: Kitasato, of Japan; Kerr, of China; Mowritz, of Hawaii; Carrasquilla, of Columbia; Impey, of South Africa; Smith, of Canada; Goldsmidt, of Madeira. Je vous prie simplement de rectifier ce vol!

You stole from us, after you had especially stated in a letter to Dr. Goldschmidt that you did not believe in such measures, our idea of official delegates of governments. You certainly stole the credit of that idea. (See Dr. Petersen's letter to Goldschmidt.) Je vous prie simplement de rectifier ce vol!

I will further say that in your letter of the 16th of November, 1896, to Dr. Goldschmidt you say: "You write me that Dr. Armauer Hansen has approved the project of Dr. Ashmead. I can assure you of the contrary. The truth is that Dr. Ashmead has acted without authorization of the Norwegian government, or

NOTE.—June, 1901: "*Germany. Russia*, and Roumania have decided that in future no passports be issued to lepers, and have formed an agreement to that effect.—*Philadelphia Medical Journal*

without the formal authorization of Dr. Hansen,* as you may see by his signature under our invitation; and as to the European and American governments, who had promised Dr. Ashmead their support, I believe again that there must be a mistake."

The pamphlet published by me in the *Magazine of Medicine*, of Atlanta, proves that you committed, in this case, not *un vol*, but *un mensonge*. *Je vous prie de le rectifier!*

Against Substitution. — The Tennessee Legislature has passed the following act and the Governor has signed it; it is a law. Other States should follow the example and at the next session pass a similar law:

An Act to prevent the substitution of any drug in filling physicians' prescriptions by druggists in the State.

SECTION 1. Be it enacted by the General Assembly of the State of Tennessee, That it shall be unlawful for any corporation, firm or person, or any combination or association of corporations, firms or persons engaged in the business of buying, compounding and selling drugs and medicines to substitute any drug or medicine in lieu or instead of that given to the patient by the physician on the face of his prescription.

SEC. 2. Be it further enacted, That it shall be unlawful for any agent or employe of such person, firm or corporation or association or combination of persons, firm or corporations engaged in the business of buying and selling drugs in this State to substitute any medicine for the specific medicine mentioned in the physician's prescription.

SEC. 3. Be it further enacted, That any person, firm or corporation violating the provisions of this act, or aiding or abetting the violations of the same, shall be guilty of a misdemeanor and upon conviction shall be fined not less than $25 nor more than $100 for each and every offense.

SEC. 4. Be it further enacted, That this act take effect from and after its passage, the public welfare requiring it.

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*NOTE.—Copy of extract of a letter of Dr. Hansen to Dr. Ashmead: "*Should you think it very desirable to have my name you may use it, but on the condition that the congress is only regarded as arranged by us. If the congress then will meet in Bergen, I hope still that the Norwegian government will pay the business matters.*"

CORRESPONDENCE.

THE QUESTION OF CONTAGION ON BOARD THE YELLOW FEVER SHIP CHILE.

I have received the following letter:

"UNITED STATES DEPARTMENT OF AGRICULTURE,
DIVISION OF ENTOMOLOGY,
WASHINGTON, D. C., July 22, 1901.

"DEAR DOCTOR ASHMEAD:—I have your little paper headed, 'Lessons from the Yellow Fever Ship Chile.' I have read it with great interest, and all the more so since I have met your brother who was on the ship. In the last paragraph the expression, 'The ship with her infected mosquitoes from Panama,' introduces the only reference to mosquitoes in your brother's account. As a matter of fact, did he notice mosquitoes on board the vessel during the voyage—that is to say, from July 9th to July 21st? [Voyage was from July 9th to August 1st, but the last cases stricken occurred on July 21st.—ASHMEAD.] There was hardly time on the whole trip for infected mosquitoes biting the first patient on the vessel to become capable of transmitting the disease to others. The journey was such a short one that the vessel was singularly unfortunate in getting at Panama so many infected mosquitoes. Yours sincerely,

L. O. HOWARD."

(Reply.)

"NEW YORK, July 28, 1901.

"DEAR PROF. HOWARD:—I submitted the following questions as bearing upon the inquiry contained in your letter of 22d to my brother, who sailed yesterday for Puerto Principe, Cuba. He goes there as locating engineer on the Cuban Company's line of railroad now building from Santiago to Havana. I append his replies.

1. "'Did you notice mosquitoes aboard ship during the voyage—that is to say, from July 9th to July 21st?'

Answer.—"'I have no notes in my diary of their being troublesome, and can only recall that during a visit in an officer's room I saw one on the wall near an electric light. I was only in the

steerage once, and do not know whether there were any there. The first two Italian steerage deaths occurred on the night of July 14th-15th, and in the morning of the 15th the panic-stricken Italians from the steerage, who were sick either from fright or disease, were moved up to first cabins aft.'

2. "'Were the five Italians of the steerage and the one in the first cabin, who were stricken with yellow fever, any more exposed at Panama than those who escaped?'

Answer.—"'Do not know. There were nine Italian steerage passengers, who were all blood relations, and they probably all stayed together while they were waiting at Panama for the steamer south. I understood they had been on the isthmus thirteen days. [Rather long incubatory period, counting anywhere from between June 26th and July 9th to July 21st, the date of last case stricken.—Dr. Ashmead.] About the first cabin Italian I know nothing except that he looked weak when he came aboard, and that he refused to allow the ship's doctor (druggist) to treat him at all, although the doctor and Captain Hay went to his stateroom several times.'

3. "'Did Mr. Loos have any special exposure known to you, or did he tell you about any?'

Answer.—"'About the third day out I talked with Loos, who said he was not feeling well, and the fourth day he stayed in his stateroom. He told several of us he had stayed at the Hotel Marina at Panama, which is right close to the bay and in a very unhealthy position of the town. July 15th Mr. Loos told one or two of our party, who visited him, to stay away, as he thought he had yellow fever. He died about 4 A. M. July 17th.'

4. "'Did the captain or officers express opinions as to the contagion of the ship?'

Answer.—"'Do not understand this question. The captain and officers, however, refrained from talking about the events of this particular voyage, confining their remarks to other voyages of other ships. P. H. Ashmead.'

"It seems to me that the contagion of the two Italians stricken on July 21st belonged to the ship, otherwise they should have had the outbreak sooner. From July 9th to 21st would be twelve days' incubation. The whole nine Italians were at the Hotel Marina together. Loos, stricken on the 16th, had gone up to see Panama, against the advice of his first cabin friends, who

waited in Colon. He was three days in Panama. The other first cabin passengers did not go to Panama. In 1871 I myself spent a day and a half on board a steamer in Panama Bay, and experienced many bites of mosquitoes. It was the rainy season, June. Two of my companions got chagres fever.

"May I ask a question? Is there any connection between the plasmodium malariæ and yellow fever? And I beg to answer it with the following experience:

"In 1878 I was practicing in the upper Missouri Valley. During the summer and fall the lower Mississippi region had one of the worst outbreaks of yellow fever known in this country, centering about Memphis, Tennessee. It got entirely beyond the control of the quarantine and sanitary officers. Memphis is 400 miles below St. Louis. St. Joseph, Mo., near where I practiced, is 400 miles north of St. Louis. New Orleans is 800 miles south of St. Louis. All our types of malarial fevers in the North Missouri Valley were the severest types known in that region for years—pernicious intermittent, hematuric, and other hemorrhagic disease types, hematemesis, and even hemorrhagic conjunctivitis.

"One would be called to a patient and find him unconscious, breathing stertorously, cross eyed—a cerebral type of intermittent congestive chill type, quickly responding, however, to the prevailing treatment—that is, a hypodermic injection of 30 grains of quinine, an enema of croton oil, and stripping the patient and then wrapping him in a sheet wrung out of hot water. Consciousness would be restored promptly and internal treatment then carried on by the mouth. There was no yellow fever as high up the Missouri as that. What connection could there have been between these bad types of malarial fever with us and the yellow fever epidemic lower down? The climate with us was not different from what it always is. Yet the plasmodium malariæ took on a very virulent quality.

"Sanarelli claims that the germs of yellow fever circulate in the blood; so does the plasmodium malariæ. His cultivation of the yellow fever germ was made from the liver, and it is his opinion that the bacillus of yellow fever is apt to cause blood poisoning. Can there be any connection between the malarial dysentery, for example, and yellow fever? Why should poisoning by plasmodium malariæ in that season have produced hemorrhagic types of fever? Are not the hemorrhages of malarial

fevers caused in the same way as the black vomit of yellow fever? In fact are not the two processes identical?

"Yours truly, ALBERT S. ASHMEAD."

ADDENDUM.

Under date of August 2, 1901, Prof. Howard writes: "Your experience indicating a possible relation between malaria and yellow fever is very interesting, and I shall not be surprised if we find that the causative organism of yellow fever inhabits the blood at least in some stages of its existence. Surely the blood inoculation experiments conducted by Dr. Reed would indicate this."

Murder of Dr. W. W. Watkins.—Dr. William Woodbury Watkins, at one time a St. Louis medical practitioner, was killed at Moscow, Idaho, Sunday morning, Aug. 4, whilst making a professional call in his buggy. His murderer was William Steppen, supposed to have been insane, who also wounded two others. Upon refusing to surrender he was killed by a posse. Dr. Watkins was well known in St. Louis. He was born in New Hampshire in 1846 and came to Missouri in 1859. He attended the St. Louis Medical College, graduating there in 1872. In 1882 he became a member of the faculty of the St. Louis College of Physicians and Surgeons, occupying the chair of the Principles and Practice of Medicine. In 1884 he moved to Moscow, Idaho, where he built up a successful and lucrative practice, being a general favorite in his new home.

He was an ardent Mason, being a Knight Templar, and an exalted member of the Elks. He was an active politician, having refused the nomination of Governor of Idaha on the Republican ticket. He was the chairman of the first Republican State Convention held in Idaho. He was equally active in medical matters. He organized the State Medical Asaociation of that State, and was elected its first president. He leaves a wife and three children—two married daughters and a son.

He was a man who was a favorite with all who knew him and full of activity and enterprise. He did much to build up Moscow, and his loss will be keenly felt by all there.

ST. LOUIS
Medical and Surgical Journal.

A. H. OHMANN-DUMESNIL, A.M., M.D.,
Editor and Proprietor.
No. 5 South Broadway, St. Louis, Mo., U. S. A.

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EDITORIAL DEPARTMENT.

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EDITORIAL.

AN UP-TO-DATE ORDINANCE.

An ordinance has been introduced in the St. Louis City Council which bids fair to become law. Whilst it purports to have been introduced by request, we have been informed that it was written by that efficient and most competent Health Commissioner, Dr. Max C. Starkloff. If he is the author it does him both credit and honor, and the medical profession should support him in the enforcement of this measure to a man. There is no reason why this support should not be accorded. It is a step in the right direction and is in accordance with the latest scientific views in regard to that dread disease, tuberculosis of the lungs. All civilized countries, so far as their medical men are concerned, are a unit in their conclusions as to its repression and in regard to the prevention of its spread.

The bill which has been introduced in the St. Louis City Council bears the following title: An Ordinance Declaring Consump-

tion to be a Contagious and Communicable Disease, and Prescribing Regulations to Control the Spread of the Disease. It reads as follows:

SECTION 1. Consumption, whether classified as "Tuberculosis," "Phthisis," "Phthisis Pulmonalis," "Tubercular Phthisis," "Tubercular Consumption," or "Pulmonary Consumption," is hereby declared to be a communicable disease.

SEC. 2. It shall be the duty of each and every physician of the city of St. Louis to immediately report to the Health Commissioner each case of consumption (as defined by Section One of this ordinance, so determined by the examination of the patient's sputum or clinical evidence, which he may be called upon to attend, or is attending, within the limits of the city. Any physician violating the provisions of this section shall be deemed guilty of a misdemeanor and upon conviction shall be fined not less than fifty nor more than two hundred and fifty dollars, to be recovered for the use of the city of St. Louis before any court having competent jurisdiction.

SEC. 3. In reporting the cases of consumption as defined by this ordinance, the physician shall be required to give the name and residence (street and number), age and color of each case.

SEC. 4. Whenever the Health Commissioner shall have information of the existence of any case of consumption in the city, he shall cause the premises to be examined, and have notes taken of the sanitary conditions of the same, the number of persons living in the house, and whether the patient occupies a room by himself, or herself, or with others, and he is hereby authorized to give such instructions in relation to the management, sanitary features and surroundings of the case as will insure the best means of preventing the spread of the disease.

SEC. 5. No houses in which there are cases of consumption shall be placarded.

SEC. 6. The Health Commissioner when requested by any physician shall cause a microscopical examination to be made of the sputa of any person, in order to ascertain whether it contains the bacillus tuberculosis, and the Health Commissioner shall have the power to order this microscopical examination to be made by any competent person in the employ of the Health Department, and on the order of the Health Commissioner, such person so employed shall promptly make the examination ordered.

SEC. 7. Every room or rooms that have been occupied by a consumptive patient shall, as soon as the case has terminated, or been removed, be thoroughly disinfected by the Health Department, and it shall be the duty of the Health Commissioner to order such disinfection.

SEC. 8. Whenever a case of consumption has existed over a period of ninety days, the rooms of such patient shall be disinfected, whenever the physician in charge of the case shall request it, and such disinfection may be renewed every ninety days during the continuance of the case.

SEC. 9. Any person failing to comply with any of the provisions of this ordinance, or any person or persons resisting by force or otherwise the enforcement of the provisions of this ordinance, shall be deemed guilty of a misdemeanor, and upon conviction shall be fined not less than fifty nor more than two hundred and fifty dollars, to be recovered for the use of the city of St. Louis before any court having competent jurisdiction.

Some carping critics who are pseudo-scientifically inclined may call this an inadequate measure; but it is a very good beginning, and when in operation for a certain length of time experience with its workings will readily suggest any needed changes or improvements. It is perfectly in accord with the latest conclusions of experts in tuberculosis and will prove itself a most salutary measure in its present shape. We learn from the *Medical Record* of August 3 that the Tuberculosis Congress recently held in London did not endorse the views of Koch, that bovine tuberculosis is not transmissible to man. The closing session was held under the presidency of the Earl of Derby, and "at this meeting resolutions were adopted recommending legislation toward the prohibition of expectoration in public places, the notification of the proper authorities in cases of phthisis, and the use of pocket spittoons. It was asserted that these sanitary provisions were indispensable in order to diminish tuberculosis. A resolution was also adopted expressing the opinion of the Congress that health officers should continue every effort to prevent the spread of tuberculosis through milk and meat. As, however, the question concerning human immunity from bovine tuberculosis was of vital importance to the public health and the agricultural interest of the country, it was urged that the government immediately institute a rigid inquiry into the identity of human and bovine tuberculosis."

We cannot hope that such prophylactic measures and as thorough safeguards will be adopted at once in St. Louis; but the adoption of the ordinance quoted above will prove the entering wedge to the introduction of one of the best and most prophylactic of measures ever made the object of civic legislation.

CHEAP JOHN SYPHILOGRAPHERS.

He who has had any opportunity of reading periodical medical literature has, beyond doubt, observed that many of the articles which appear have really no *raison d'ètre*, and are merely written for the purpose of affording their writers an opportunity of making themselves a little better known than those who can not or dare not commit anything to paper. Among the writers there exist those who never can write anything but matter that is both interesting and instructive; and, on the other hand, there are those who are simply afflicted with a *cacoëthes scribendi*, whose every contribution is a bore and an infliction. It is not of those who merely rehash or condense more or less intelligently those things which have been well written and pass off the ideas of others as their own of whom we wish to speak, but rather of those who, with but a very vague idea of a subject, endeavor to create an impression that they know whereof they write, and make desperate attempts to speak *ex cathedra* in a manner which simply makes their efforts appear ludicrous.

We are amused to see the desperate efforts which some medical writers make to elucidate some of the problems of syphilology. It is very often pitiful to look at the desperate efforts made by some to explain apparent obscurities which have long since been elucidated by acknowledged masters of the subject, who themselves hesitate to approach certain points which are decided off-hand by those who have no adequate knowledge of that concerning which they do not hesitate to express dogmatic opinions. We are continually confronted with ideas that are false, with others that are antiquated, and often with those that are distorted. We are occasionally greeted with an idea that has long been buried, and which we hoped had been relegated to the great collection of scientific fossils, and is resuscitated with no hope of survival by the writer, who possesses an enormous library on syphilology of six volumes, issued at the time when the duality of syphilis was still considered a burning question.

Were this all it might not be as serious a matter as the pseudo-syphilology with which we are presented in more pretentious works. Thus it is a matter of daily occurrence to find the subject of syphilis disposed of, in a work on general surgery, in some eight or ten pages. And in these few pages we find included ideas which are no longer accepted, views which are incorrect, and fallacies paraded which are certain to ultimately lead their reader into most disagreeable paths. The same may be said of the works on the principles and practice of medicine. These books do not as a rule take up what are now known as the specialties, but they will persist in giving a most incomplete idea of syphilis and its treatment. The disease is one which possesses a very large literature, which is constantly increasing, and when we speak of literature we mean those things written by authors of extensive experience, trained in observation, expert in pathology, and successful in treatment.

But what shall we say of those mainstays of medical students which but too often prove broken reeds to those who depend upon them—medical compends? Whilst good as reminders on general subjects, but very few are such in any of the specialties, and he who thinks that he can obtain a medical education from them shall certainly be disappointed. As a guide to more extensive quizzing they are useful, and as companions to the larger works they are deserving of support; but as the only books to be consulted they are deceptive, incomplete, and disappointing. And, unfortunately, it is on these very inadequate little books that many writers depend to round out their articles.

Large reading, much observation, experience of a clinical nature, and a due appreciation of the subject in hand will make a syphilographer. The mere fact of having read a few inadequate articles and a few old books will not entitle any one to claim a knowledge of one of the most complicated diseases with which we are called upon to cope. Had the majority of the medical profession but a slight idea of the immense literature of the subject, of the almost infinite complications which arise, of the difficulties of treatment in many cases, it would readily refrain from writing so much on the subject and appreciate more than ever the truth of the lines:

> Taste not or drink deep of the Pierian spring.
> A little knowledge is a dangerous thing.

PRESCRIBE ORIGINAL PACKAGES.

So many complaints have recently cropped out to the surface again from physicians and manufacturers of proprietary remedies on the subject of substitution, that it would seem to be an opportune moment to again call attention to the subject. The physician who has spent money and time as well as cerebral energy in the acquirement of his profession and who afterwards does his utmost to achieve a success, cannot afford to have all his efforts nullified by a druggist without conscience who, for a few cents, will substitute and render all the efforts of the physician nugatory. As we have stated on former occasions, much of the fault may be laid at the door of the man who prescribes. He thinks that his duty ends with the writing of a prescription, when he really ought to see to it that that prescription is properly filled.

Having detected fraud on the part of a druggist, the only redress is the law. No physician cares to resort to its delays and costs, and so he loses caste and reputation with patients because some unscrupulous druggist has seen fit to injure his patient and himself for a few paltry cents. There is a redress, however, for this evil. Send your patient to a reliable and honest druggist, and always prescribe proprietary remedies in *original packages.* In addition to this, inform the patient that the remedy will be packed in this form, and all those concerned in the transaction will be satisfied. On the other hand, the manufacturers of proprietory medicines should make many of their packages less bulky.

Insist upon the druggist dispensing what is prescribed, never fail to specify what you want, and if the druggist fails to do his duty blacklist him. Such a method will do more than moral suasion or argument, as it is in line with the method he uses in substituting. It hurts his soul because it injures his pocket-book.

A Chinese Leper.—A Chinese leper has been unearthed in St. Louis. The patient is Dong Goud, of 4815 Easton Avenue, whose vanity caused him to seek relief for an eruption on his face. The examination led to his being suspected, and upon his being submitted to an examination by dermatologists, called for the purpose by the Health Commissioner, he was declared to be affected with macular leprosy of the anesthetic type. He will be isolated at Quarantine, where lepers have been sent in former years.

BOOK REVIEWS.

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Edited by HENRY W. CATTELL, A.M., M.D., with the Collaboration of JOHN B. MURPHY, M.D., ALEXANDER B. BLACKADER, M.D., H. C. WOOD, M.D., T. M. ROTCH, M.D., E. LANDOLT, M.D., THOMAS G. MORTON, M.D., CHARLES H. REED, M.D., J. W. BALLANTYNE, M.D., and JOHN HAROLD, M.D. With Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Vol. II., Eleventh Series. 1901. 8vo., pp. 304. Illustrated. [Philadelphia: J. B. Lippincott Company. 1901. Price per volume: cloth, $2.00; half leather, $2.50. Each series consists of four volumes.

We are once more called upon to review a volume of International Clinics, whose latest issue we have before us. It remains to-day the most practical work of its kind in the world, and its eleven years of continued success have in no way had an influence other than that of raising its standard and making each successive issue better than the last preceding it. In the present volume we are given a veritable feast of medical and surgical literature, and the book is so full of good things that it is a rather difficult task to make selections to quote as examples of the general excellence which pervades the entire work, and it is really impossible to give even a passing review to all the contributions. One feature which we have admired in the last few series is the great prominence given to the articles on therapeutics and medicine, two subjects which are certainly of the highest importance to physicians; and surgical and special subjects are very properly made secondary to those of greater value and practical application than the more complicated special conditions and operations.

Surgical Analgesia by Injections of Cocaine Into the Spinal Column, by T. H. Truffier of Paris, and the Oxytocic Effect of the Lumbar Injection of Cocaine, Particularly to Induce Labor, by A. Doléris, M.D., of Paris, are two most notable contributions to the subject of cocaine injections in the spinal cord, and form good guides for the further study of this important method of medication. No less important is the article by A. Broca, M.D., of Paris, on the Conservative Treatment of Appendicitis.

The author is opposed to an immediate operation, and statistics show that delay has improved the results of his operations by reducing the mortality from about 50 per cent. to 10.48 per cent. This is certainly an argument in favor of conservatism.

One of the most interesting articles in the book is that by Jay F. Schamberg, M.D., of Philadelphia, on Smallpox, with Particular Reference to the Prevalent Epidemic. It is instructive to a degree, and the six plates illustrative of the disease, at various stages, are in the highest degree useful and will form valuable guides to physicians who are rather shaky on the subject of variola. Ludvig Hektoen, M.D., the celebrated pathologist of Chicago, contributes a good article on a subject but little understood at present by the medical profession. It is on Actinomycosis of the Respiratory Tract. The account is a most excellent one and will lead many to examine more closely post-mortem specimens simulating the presence of other processes.

Three excellent contributions are made in the department of neurology on the subject of locomotor ataxia. H. S. Frenkel, M.D., writes of Movement Therapy for Locomotor Ataxia; M. Allen Starr, M.D., LL.D., contributes a general article on Locomotor Ataxia; and Alfred Fournier, M.D., the celebrated venereologist, gives a good paper on the Detection of Locomotor Ataxia in the Early Stages. The three contributions form an interesting symposium on the subject. Surgery is represented by two articles: one on Splenectomy, by John R. Wathen, M.D., which is well considered and clear. In the department of obstetrics and gynecology a notable article is that on Abortions, by J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S. (Edin.). Like all of his contributions, this one is above the average in excellence. Pediatrics, Pathology, Diseases of the Eye, and Laryngology receive proper recognition. The concluding article is on the Pronunciation and Definition of Some of the Newer Medical Words, by W. A. Newman Dorland, M.D.

Our readers may form a faint idea of what this book is; but they can never know unless they possess a copy, which they will certainly read with avidity. We are more pleased with each volume as it appears than with its predecessors, and yet none can be said to be anything but excellent.

Practice of Medicine. By Eminent Medical Specialists and Authorities. Edited by GEORGE ALEXANDER GIBSON, M.D., D.Sc., F.R.C.P. Ed. In Two Volumes. Vol. I. 8vo., pp. 824. Illustrated. Vol. II. 8vo., pp. 907. Illustrated. [Philadelphia: J. B. Lippincott Company. 1901. Price, cloth, $8.00; sheep, $10.00.

This is a work on the practice of medicine by British and Scotch medical men of extended reputation, and, as is well-known, there are no more exact, painstaking or thorough writers

than our cousins across the water. The list of contributors is a large and distinguished one, and the work itself is what publishers in this country would call a "system." Each contributor has taken up a subject of which he has made a special study; and, as a natural result, we are presented with a work as thorough as the limitations of space could permit it to be. Thus skin diseases are disposed of in 124 pages by Allan Jamieson, a recognized authority on the subject. Whilst as full as the smaller text-books for students are, it is still short of the demands which a general practitioner might wish to make upon it. Syphilis is very summarily disposed of, and this leads us to remark that these special topics should be relegated to special works, and the space devoted to them be relegated to those troubles which are of a necessity in the province of the general practitioner. Besides this, the illustrations in this work are confined to the delineations of a few animal parasites and temperature charts, which, in this age of numerous half-tones, seems but a meagre showing.

Of the text naught can be said but in praise. It is well-written, thoroughly considered, and very systematic. General diseases are disposed of in a rather summary manner, but their consideration is constantly recurring in the text under separate heads. The diseases of the alimentary, urinary, and nervous systems are certainly fully considered, and the authors of the contributions on these subjects have done them full justice. Whilst the disposal of leprosy in four pages and actinomycosis in two seems to be a rather marked curtailment; they are of such infrequent occurrence that aid must be sought from those of extensive experience, and the space thus saved is more profitably devoted to troubles of daily occurrence in medical practice.

The criticisms which have been made to this work are not meant to imply that it is inferior by any means, but rather to show that, in the midst of so much excellence, trivial defects become more noticeable than if the entire work were mediocre. It is far from being this, and it will compare more than favorably with any of the late works on practice issued from the press of late years. It may easily take its place in the front rank with other works on the subject. We are pleased to see it issued by an American publisher, as American books are now meeting with good sales in Great Britain, and it is only by reading the works of one another that writers in the same field can hope to learn one another's work and views and by this interchange add to the general fund of knowledge.

Mr. Young J. Pentland of Edinburg and London is the British publisher, and his enterprise is well-known in the matter of bringing out good medical books. Our J. B. Lippincott Company is in no wise less enterprising, as the work before us testifies, and we are in hopes that the two firms working together

will be of more than ordinary value to the English-reading members of the medical profession everywhere. The value of the work before us is unquestionoble, and no better addition can be made to his library by a physician. The mechanical execution is *par excellence*, and the contents of the highest worth. We hope to hear of a good sale of Gibson's Practice.

Report of the Sanitary Investigations of the Illinois River and Its Tributaries, to the Illinois State Board of Health, with Special Reference to the Effect of the Sewage of Chicago on the Des Plaines and Illinois Rivers Prior to and After the Opening of the Chicago Drainage Canal. 8vo., pp. 219. With Diagrams and a Colored Map. [Springfield, Ill.: Phillips Bros., State Printers. 1901.

This is a very elaborate report, with many tables more or less complete and elaborate in character. Dr. James A. Egan, the Secretary of the Board, opens the Report with an article on Pollution of the Illinois River as Affected by the Drainage of Chicago and Other Cities. Then follows a paper on Chemical and Bacteriological Examination of the Waters of the Illinois River and Its Principal Tributaries, by John W. Long, Sc.D. From this it would appear the water is thoroughly purified before Peoria is reached, and that whatever means may be adopted must be done after this point, and the cause of the pollution of the Illinois River here is the cattle shed and distillery refuse from Peoria and Pekin.

The next portion of the report before us deals with Chemical and Bacterial Examinations of the Waters of the Illinois River and Its Principal Tributaries, by Drs. F. Robert Zeit and Gustav Fütterer, of Chicago. This special plea for the Chicago Drainage Canal concludes with the Report of a Preliminary Sanitary Survey of the Illinois River Drainage Basin, March, 1901, by Jacob A. Harman, C.E.

We are afraid that the entire Report will not prove completely satisfactory to the St. Louis health authorities, who prefer to have the decision of the Supreme Court of the United States on the question at issue.

LITERARY NOTES.

Books Received.—The following books have been received during the past month, and are reviewed in the present number of the JOURNAL:

International Clinics. A Quarterly of Clinical Lectures and Specially Prepared Articles on Medicine, Neurology, Surgery,

Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners, by leading members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., with the Collaboration of John B. Murphy, M.D., Alexander D. Blackader, M.D., H. C. Wood, M.D., T. M. Rotch, M.D., E. Landolt, M.D., Thomas G. Morton, M.D., Charles H. Reed, M.D., J. W. Ballantyne, M.D., and John Harold, M.D. With Regular Correspondents in Montreal, London, Paris, Leipsig, and Vienna. Vol. II., Eleventh Series, 1901. 8vo., pp. 304. Illustrated. [Philadelphia: J. B. Lippincott Co. 1901. Price per volume: cloth, $2.00; half leather, $2.50; each series complete in four volumes.

Report of the Sanitary Investigations of the Illinois River and its Tributaries. With Special Reference to the Effect of the Sewage of Chicago on the Des Plaines and Illinois Rivers prior to and after the Opening of the Chicago Drainage Canal. [Springfield, Ill.: Phillips Bros., State Printers. 1901.

Practice of Medicine. By Eminent Medical Specialists and Authorities. Edited by George Alexander Gibson, M.D., D.Sc., F.R.C.P., Ed. In Two Volumes. Vol. I., 8vo., pp. 824. Illustrated. Vol. II., 8vo., pp. 907. Illustrated. [Philadelphia: J. B. Lippincott Co. 1901. Price, cloth, $8.00; sheep, $10.00.

The Buffalo Medical Journal states in its last issue: Dr. A. A. Hubbell, of Buffalo, for several years associate editor of this journal, has resigned from the editorial staff, on account of increasing professional demands upon his time. Dr. Hubbell is an efficient worker in the field of medical periodical literature, from whom we part with regret.

The American Electro-Therapeutic and X-Ray Era is a monthly quarto of twelve pages, published by R. Friedlander, at 1132 Masonic Temple, Chicago. This journal is the official organ of the Chicago Electro-Medical Society, and promises to be a useful ally to those interested in the subject of electro-magnetic auxiliaries and their use. Dr. J. O. Hewitt is the editor, and he has produced a most interesting publication.

The Journal of the New York County Medico-Pharmaceutical League is a twelve-page monthly, published in New York City. It is pretty well edited and contains some readable matter, but it is execrably printed. It looks as if done on an amateur hand press with a lot of second-hand type, various styles being interspersed on account of a lack of type. The subscription price is placed at $1.00 a year.

MELANGE.

The Wisconsin State Medical Society.—At the annual meeting of this society, held at Waukesha, June 26-28, under the presidency of Dr. J. F. Pritchard of Manitowoc, the following officers were elected: President, D. W. H. Nielsen of Milwaukee; vice-presidents, Drs. A. J. Hodgson of Waukesha and L. H. Pelton of Waupaca; secretary, Dr. C. S. Sheldon of Madison; assistant secretary, Dr. A. T. Holbrook of Milwaukee; treasurer, Dr. S. S. Hall of Ripon; censor, Dr. Wallbridge of Milwaukee. The meeting of the society in 1902 will be held at Milwaukee.

The Fourteenth International Medical Congress will be held in Madrid, under the patronage of King Alfonso XIII. and his mother, the present Queen Regent, on April 23-30, 1903. The fee for membership in the congress is thirty pesetas ($6), which may be sent at any time prior to the opening of the congress to the Secretary-General, Dr. Angel Fernandez-Caro y Nouvilas, Madrid. The scientific work of the congress will be divided among the following sections: 1. Anatomy (including anthropology, comparative anatomy, embryology, descriptive anatomy, normal histology, and teratology); 2, physiology and biological physics and chemistry; 3, general pathology, pathological anatomy and bacteriology; 4, therapeutics, pharmacology, and materia medica; 5, internal medicine; 6, neurology, mental diseases, and criminal anthropology; 7, pediatrics; 8, dermatology and syphilography; 9, surgery; 10, ophthalmology; 11, otology, rhinology, and laryngology; 12, odontology; 13, obstetrics and gynecology; 14, military medicine and hygiene; 15, hygiene, epidemiology and sanitary science; 16, legal medicine. The ladies accompanying members will be entitled to reduction in railway fares and to participate in all the excursions and other entertainments given in honor of the members of the congress. In order to secure these privileges they must have a personal card, obtained on payment of a fee of twelve pesetas ($2.40). The executive committee of the congress is constituted as follows: President, Prof. Julian Calleja of Sanetez; Secretary General, Dr. Angel Fernandez-Caro y Nouvilas; Treasurer, Dr. José Gomez of Jeana; members, the presidents and secretaries of the sections.

The Buddhist Doctor as He Practices in Japan.—(St. Joseph, Mo., *Gazette-Herald*, Aug. 4). In Japan a doctor never sends a bill. Instead of putting a value on his services he depreciates them. He will tell you that it was God who cured you, not he. To claim they were of worth would be reprehensible, a violation of Buddhist truth. Sometimes, but not rarely, a patient will offer to pay his doctor whatever he thinks is a fair equivalent. He folds it in a "shinji" (present) envelope, tied about with a red and white string, which he hands to you with his expression of thanks. More often there is no fee proffered. Usually in a day or two, at any rate never the same day, a servant of the patient, if the latter is of the better class, brings to your kitchen door, which is the front of the house (a parlor is always in the rear), from a dozen to two hundred hens' eggs. These are carefully packed in a partitioned wooden box, which is tied around with a red and white string. One hundred eggs is considered the proper fee for almost every medical service. This box is invariably politely received and the account is thus settled.

A doctor's larder, as you may well imagine, is always well supplied with eggs. The doctor grows fat on eggs, and although that devilish box is a most abominable sight to him, yet he keeps his temper and never refuses the gift.

The practice of paying the doctor in eggs, and it is known to be mere pretence, is traditional, originally belonging to the health god period. In that distant past, Buddhist priests were doctors, as some of them are to day, for that matter, for medical science is not yet separated from the Buddhist faith. There remains still more or less confusion of these two professions. If not combined, they yet walk side by side like Siamese twins. In most Buddhist temples there are seen life-sized human wooden figures set up in a conspicuous place, like the corridor of our Christian St. John and St. Luke's hospitals, to be rubbed and prayerfully appealed to by the people for help in their physical distress.

In front of these idols there are slotted boxes so large that a man can enter, into which the sick throw coins which the priests deftly seize and put to the credit side of their ledger. These images are well worn down, by devotees, who have rubbed the figures and then the corresponding portion of their own bodies. I saw one at Asakasa which had been in constant use for seven hundred years. They are representant of Biuzara Souja, a ser-

vant of the disciples of Shaku, noted for his energy and untiring perseverance in attending to his duties.

"Transfer by friction" as a method of curing disease is a very ancient idea, a practice which our western professors of animal magnetism might study with profit. Jizo, being scrubbed with straw, a method of massage not known to us, and plentifully bespattered with water, is frequently seen in the temples. It is considered a sovereign remedy for pains in the loins and lower extremities. Bespattering with water, a method of therapeutics, akin to our shower bath, was brought by Buddhist priests to the Hermit Kingdom, with their hot baths treatment of skin diseases, long before our Pasteur and Lister taught us sterilization of our surgeons' hands and instruments.

The custom of using hot water, blessed by some Buddhist pope, and spattered over the body, while a shaven-headed priest clangs on an Amida bell, which has not been allowed to be silent for perhaps centuries, came to Japan in the sixth century, with tea drinking. I lived for two months in a room of Sheba temple next to one of these fiendish contraptions.

Even the tea drinking, the use of water which has been boiled, instead of raw water, which is always contaminated with typhoid and dysentery germs or the eggs of the distomata worms, was also introduced by the Buddhists, as a therapeutical measure.

Besides all these methods of treating the sick, the priests sell to pilgrims who visit the Japanese holy places, like Lourdes, the ten stations on the side of Mount Fuji, amulets and charms, which are hung up at the entrance gates of private residences; a piece of paper blessed by Amida, and bearing the impression of a black hand of Chinese-hachio-tametomo, is employed to ward off an attack of smallpox (the name itself was not enough); a piece of red paper with three of the characters of "horse" (a kind of horse serum fetichism), serves a similar purpose; a rice-spoon (formerly this was the priest's measure for liquid medicines, and it is now the symbol of the doctors' profession) is also used. From this last comes the modern superstition that medicines from a spoon are better than pills or powders. Garlic, formerly the priests' own vegetable, is still hung up to protect sufferers from chills and colds.

In Tokio there are six temples, Buddhistic medieval hospitals, each with a full corps of medical priests. Amida Niorai is the premier divinity of this Buddhist faith, who is generally repre-

sented sitting on a lotus flower. This God is considered to be so far above the common run of gods (a professor or specialist in fact) that it is of little use for ordinary mortals to attempt to attract his attention, or to intrude on the great one's sublime and total unconsciousness of all mundane affairs, in which he is always enveloped. Sick people petition this deity through the priests for restoration to health. Diseases of the eyes are especially under the care of this "divinity of all the medicinal herbs," as they call him. He is supposed to write off (forgive) human ills in proportion to the amount of prayers paid for: Jigoku no sata kane shi dai. "Judgments of hell depend on money," alluding to the purchase of his services by the medical bouzes.

In Japan there are also temples to "Shichimen," the seven-headed serpent, a monster canonized by the Buddhist pope and represented with seven halos. St. Shichimen is visited by the sick, and when properly appealed to by money, of course, gives remedies for all internal and external ills. For the serpent there, as everywhere, is supposed to be god of rain. And as he crawls with his belly to the ground they think that he derives power from those elements which are his and that virtue resides in them by his permission.

On the road to Fujiyama, which is the highest mountain peak in the country, 12,000 feet, there is a noted leper pool, presided over by priests, where thousands of Japanese lepers at certain seasons congregate "to wash and be made clean." Around the foot of that mountain are found leper towns, whose inhabitants bathe in certain pools, shunned therefore by the healthy population. Fujiyama is the general resort of pilgrims in search of health. "In December," says the proverb, "the doctor's house is shut." In that month the whole population is healthy, because they have just returned from their annual October and November pilgrimages to the "Buddhist health resorts."

In seeking health there is nothing purer and more serene, more happy than the life of these "heathens." A pilgrimage is undertaken; the pilgrim, mostly on foot, wears a peculiar garb of white, with scrip in his purse and staff in hand. Thus he travels a hundred miles or so to his destination. He does not search health in a palace car. Exercise, change of scene, fresh mountain air are his chief remedies.

ALBERT S. ASHMEAD, M.D.,
New York; Late Medical Director Tokio Hospital, Japan.

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ORIGINAL COMMUNICATIONS.

STREPTOTHRICAL INFECTIONS: DEMONSTRATION OF A STREPTOTHRIX, OR BRANCHED TUBERCLE BACILLUS, IN THE SPUTUM; ABSCESS OF THE BRAIN DUE TO A STREPTOTHRIX.*

BY JOHN H. MUSSER, M.D.

We have for some time been familiar with two streptothrical infections, actinomycosis and the affection designated Madura foot. There have been accumulating, however, in the last few years interesting accounts of various conditions due to other members of this group, and we must now recognize the fact that we are liable at any time to meet with pathogenic streptothricæ, other than those mentioned, causing very definite lesions.

Our knowledge of these streptothricæ dates from Rosenbach's communication in 1887, in which he describes as a cause of an erysipeloid condition an organism, growing as branching threads, but which from the branching being only apparent, not real, he calls a cladothrix. Rosenbach was able to produce the infection on himself and to obtain pure culture of the organism.

In the following year Naunyn observed a branching thread like organism in a red-brown stained area of the cerebral pia mater and in the endocardial excrescence in the heart of a girl dying

*Address of the Retiring President of the Philadelphia County Medical Society, delivered May 22, 1901, and read in part before the Cuyahoga County Medical Society, Cleveland, Ohio, and in part before the Chicago County Medical Society, 1901.

of chorea. Baumgarten confirmed the observation. No cultures were, however, obtained.

Almquist in 1890 obtained in culture from pus of cerebro-spinal meningitis a streptothrix which he considered, however, a contamination. Growth on various media was readily obtained.

Eppinger's careful paper (1890) gives the most complete information of the nature of these infections up to that time. His case, one of abccess of the brain, was a glass polisher who two weeks previously had suffered from arthritis, and showed paralysis of the left side of the face and body, with distinct tenderness over the right half of the skull. From a large abscess of the brain, and of the spinal cord, cultures, pure, of a branching thread-like organism were easily obtained. In the semi-calcified bronchial and supraclavicular glands organisms of similar structure could be demonstrated. Eppinger's illustrations do not, however, seem to justify his naming his organism "cladothrix asteroides," as the branching seems more real than apparent The experiments with animals gave rise to typical pseudotuberculosis.

No further demonstration of pathogenic streptothricæ occurred till Buchholtz's reports of his findings in a patient taken suddenly ill with acute pleural pains, fever, bloody expectoration, and running for several weeks thereafter the course of an acute tuberculosis pneumonia followed by empyema and death. Necrotic peribronchitis, cavity formation and an advanced tubercular-like condition showing caseous and ulcerating areas were present in the lungs. Some slight differences, however, between the condition found and true tuberculosis were the fact of the apices remaining unaffected, the irregular fatty-looking cavity wall, and the resemblance of the infiltration to a fibrinous pneumonic state. In the sections a branching streptothrix could be demonstrated. Cultures were not obtained.

Sabrazes and Riviere describe a streptothrix, cultivated from an abscess of the brain; also present in small abscesses of the kidney, and bronchopneumonic areas in both lungs. The subject gave the history of epileptiform attacks, and showed dulness, aphasia, vomiting, headache, paralysis and anesthesia of right arm and leg, some pain in neck and contracted pupil. The authors were able to obtain culture growths, though they were extremely scanty. This streptothrix, an anaërobic organism, resembled streptothrix actinomycosis in many ways, but did not

show any of the clubbed forms. Some filaments could be seen within the leucocytes.

The same authors isolated an aërobic streptothrix from the sputum and from a subcutaneous abscess in a second case, the second streptothrix being pathogenic for small animals.

Ferri and Faguet report a case very similar to the first of those described by Sabrazes and Riviere, isolating from an abscess in the brain of a patient taken suddenly with epileptiform attacks, pure cultures of a branching streptothrix, which, however, was not pathogenic for animals.

Under the title pseudotuberculosis streptothricis hominum Flexner reports a streptothrical infection resembling clinically pulmonary tuberculosis, with extensive consolidation. Some ascites existed. There was but little fever, and no expectoration. Autopsy showed a condition resembling closely tuberculosis; caseous pneumonia, small cavities, many areas of softening and small tubercle-like nodules throughout. In the omentum, liver and spleen were many similar nodules. The resemblance to tuberculosis was everywhere very decided, while in the lesions and exudates, in the tubercles (?) the streptothrix was readily demonstrated. Flexner considers this streptothrix and that of Buchholtz morphologically most similar to each other. Cultures were not obtained in spite of all endeavors. Animal experiments were negative, but showed that the organism was apparently not tubercle.

A pathogenic streptothrix was shown by Scheele and Petruschky in 1897 at the Congress für innere Medicin. The organism was from a woman with tuberculous history who had suffered from an influenzal-like illness, with cough and left-sided pain and irregular remittent fever. To these conditions were added later cystitis and a pustular exanthem. A pleuropneumonic condition in the left upper lobe, an enlarged heart and spleen were the chief clinical signs. A penicillium-like organism was obtained from the sputum and the skin pustules during life, and after death from the lungs. Petruschky's description shows fine branched threads without fructification forms, belonging to the genus streptothrix. He considers the streptothrix in this case as being secondary to the primary influenzal infection.

An infection clinically identical wich actinomycosis but due to a different streptothrix is described by Fullerton in 1897. Pul-

monary and cutaneous lesions, the latter an extension from the former, were present. Sputum and pus from the skin showed the sulphur like grains supposedly characteristic of actinomycosis, but the cultural qualities differed distinctly. Fullerton designates his case one of streptothrical infection. Berestnew and later Burns have described various similar organisms giving rise to infections which were considered clinical instances of actinomycosis. Berestnew's application of the term pseudoactinomycosis is objected to by Fullerton and Burns on the ground that the streptothrix found is a species distinctly different from actinomyces.

From the sputum in a case of abscess or bronchiectasis of the right lung Rullman and Ziemssem isolated a streptothrical like organism appearing very differently under different conditions, cladothrical at first, without branching on some media, with distinct branching on others. In the sputum small yellow green masses of the mycelium, resembling somewhat the granules of actinomycosis, were readily distinguished. In animal experiments, suppuration of lymph glands was produced, no evidence of tuberculosis being shown.

In a very complete paper Aoyama and Myamoto describe the finding of a streptothrix in the sputum, and in the contents of a lung abscess in a case rendered very obscure by the simultaneous existence of an aneurism in the brain, which added to the very slight symptoms of a lung affection (slight fever and cough), convulsive seizures and signs of cerebral irritation. After intensification of pulmonary symptoms and development of physical signs of pulmonary abscess streptothrical structures could be demonstrated in the mucopurulent sputum previously negative.

In the lungs, at autopsy, was a cavity toward the right base, with ragged, fatty-looking wall, surrounded by an area of gray hepatization and gelatinous pneumonia, with numerous bronchopneumonic areas in both lungs. Histologically, the absence of true tubercles and giant cells, numerous areas of necrosis, infiltration of the alveolar with small round cells or with fibrin and alveolar epithelium, infiltration of the septa with small round cells, were the chief features. Aoyama considers the picture similar to that of Buchholtz, particularly as regards the gross appearance of the cavity. Pure cultures of a streptothrix producing in experiments pseudotuberculosis of the serous membranes and or-

gans were readily obtained. This organism resembles most closely that of Eppinger, but is quite different from that of Rullman, and that of Scheele and Petruschky in its cultural qualities. It is quite distinct from actinomyces. Like many of the streptothrices at present known, it was very resistant to acids, staining well with the differentiating stains used for tubercle bacilli.

In a second somewhat similar case, diagnosed tuberculous hemorrhage, pleurisy and kakke, Aoyama was able to find both tubercle bacilli and a streptothrix which, though not growing readily at first, could be cultivated from the pseudotubercles produced in animal injections.

A most instructive article, showing the pathogenicity, the morphological and cultural peculiarities of this group of organisms is that of Larkin and Norris. Of their two cases the first, a carpenter, gave the clinical appearance and history of gangrene of the lung, following acute pneumonia. Extensive consolidation, fever, cough, very offensive sputa were present. The whole duration of this case was but little over three weeks. The second gave a history of having had Pott's disease of the spine, a chronic cough for thirteen years, mucopurulent expectoration and night-sweats for several years. During the last year, aggravation of symptoms. Consolidation of both lungs could be made out and signs suggestive of cavities. The lesions of the two cases at autopsy can be summarized as acute exudative and necrotic bronchitis with bronchiectasis, bronchopneumonia composed of alveoli filled with cellular or fibrous exudate, more or less, or organized, productive inflammation and thickening of framework of the lung.

The most striking feature at autopsy, however, was the finding of large numbers of whitish opaque masses, 3 to 5 mm. in size, attached to the necrosed areas of the bronchi, and throughout the necrotic and consolidated parts of the lung, and consisting of a network of filamentous organisms whose ends were bulbous. Although not definitely branching at first, the organism in later cultures showed this peculiarity markedly. Most noteworthy in their experiments is the fact that intravenous injections of cultures or material containing organisms could produce pulmonary abscess and empyema. Intrathoracic and intratracheal injections produced readily similar lesions.

As showing the comparative frequency of myelitis suppurativa as a metastatic occurrence in bronchiectasis, Chiari describes an

instance of such a condition due to a mixed infection with the diplococcus pneumoniæ and a streptothrix. The subject entered the hospital with a history of a sudden onset of pain in neck and head; pain and impairment of muscular power in the whole right side of the body; marked stupor and weakness, preventing examination and further history.

Autopsy, after brief illness of seven days, revealed large cerebellar abscess; multiple abscesses of spinal cord; spinal meningitis; complete obliteration of pleural cavities; pulmonary congestion; old scars at apices, with caseous masses; numerous bronchiectatic cavities in lower lobes; cylindrical enlargement of whole bronchial tree, with large purulent collection therein, and marked reddening of the mucous membrane. Aural cavities negative. Culturally only diplococcus pneumoniæ could be found.

In section of the affected tissue and in the abscess walls could be demonstrated in addition to these organisms bundles of thread-like branching structures which frequently could be seen to be completely within the capillaries. Thrombosis of some of the larger vessels and marked inflammatory reaction about the "bundles" were also demonstrable. No actinomycotic granules or rosettes were to be seen. The structure of mycelium was such, however, that Chiari considers the streptothrix to stand in close relation to or to be identical with actinomyces. He also sees a close resemblance in some of the lesions of his case to the histological changes described by Eppinger. Reference is also made by this author to a case in von Jaksch's clinic diagnosed as meningitis suppurativa in which a bronchiectatic cavity was suspected of being the focus of infection from which the suppurative meningitis might have arisen. Section confirmed the diagnosis, but disclosed in addition a large abscess in the frontal lobe. The pus of the bronchiectatic cavity and of the abscess, the abscess wall, and the inflamed bronchial walls showed structures closely resembling those of Chiari's case. No cultures were obtained.

The pathogenicity of all these varieties of streptothrices and their relation to infections and lesions described is very evident, though cultural and animal experiments are lacking in some of the earlier observations, and it is clear that actinomycosis and Madura foot can no longer occupy their isolated positions as examples of streptothrical infections. The predilection of these organisms for certain regions or systems of the body is very appar-

ent, the lungs, the brain, and the skin being most frequently affected; the brain, however, more often as a metastasis in cases of primary pulmonary or bronchial gland infections. In Rosenbach's case, "erysipeloid," the skin alone was involved. Scheele and Petruschky's patient showed pulmonary and cutaneous lesions, the latter a pustular exanthem. The actinomycotic-looking skin infection described by Fullerton was probably due to an extension from the pulmonary lesions through the chest wall. Ferri and Faguet's case showed in addition to pulmonary lesions a subcutaneous abscess.

The pulmonary lesions in which the streptothrices have been found either alone or with other organisms show considerable variety; broncho-pneumonia, extensive consolidation, abscess, bronchiectasis, empyema, and necrotic bronchitis. The histological characteristics of some of these have been already considered, and the resemblance to and difference from tubercular infections pointed out.

Fullerton's case, clinically so like pulmonary actinomycosis, did not come to autopsy.

The lesions in the nervous system, practically always metastatic infections from pulmonary or bronchial gland disease, have been abscess, meningitis, or large areas of softening from thrombosis. No special peculiarity in the formation of the lesions is described. They have been most often met with in the cerebral region. In one instance both cerebellum and spinal cord were extensively affected, spinal meningitis occurring as well. Almquist's organism was isolated from the exudate of a cerebro-spinal meningitis. The formation of "tubercles" is not described in the lesions of the nervous system, though in Eppinger's case the cerebral lesion resembled a broken-down tubercular focus.

But few other lesions are described. General "tubercle-like formations" throughout the peritoneum and abdominal organs have occurred, and in experiments pseudotuberculosis has been frequently reproduced. An abscess of the kidney was noted in one instance. Naunyn found an endocardial excrescence containing a streptothrix in his case.

From a clinical standpoint but little clinically new is presented in streptothrical infections. The cutaneous lesions of Madura foot, the cases of Rosenbach, Ferri and Faguet, Scheele and Petruschy, the cutaneous expression of actinomycosis, the actino-

mycotic-like skin infection of Fullerton, show some distinct differences. The pulmonary infections with their secondary accidents are all more or less hidden under the mask of a tubercular process, herewith termed pseudotuberculosis, or resemble some one or other of the number of pulmonary lesions, such as abscess, gangrene, or bronchiectasis, but the detection of the streptothrix and its mycelial masses is as diagnostic as the demonstrations of tubercle bacilli. Not all instances reported have been primary infections. In many the streptothrix may have been a very late invader. Many instances of streptothrical infections have probably passed unrecognized, owing to its peculiar tinctorial and cultural reactions. Rullman, Ferri and Faguet, Aoyama, Scheele and Petruschky were able to determine the nature of the disease in their cases by the findings in the sputum, as was Gwynn in the case we herein report.

The position occupied by the streptothricæ in bacteriological classification is one between the moulds (hyphonycetes) and the bacteria, to both of which organisms they show resemblance; to the former, in that they develop from spores into cylindrical dichotomously branching threads which alternately grow into colonies of masses of radiating filaments (the sulphur granules of actinomycosis). Some of the threads, however, became "fruit hyphæ," breaking up into chains of round spore-like bodies. To the latter (bacteria), in appearing as homogenous threads resembling the filiform bacteria, which in old cultures may break up into shorter bacillary and coccus-like forms; in lacking a doubly contoured membrane, and in not being composed of hyphæ filled with fluid and granular contents separated from each other by partition walls. Unfortunately for this classification other organisms, bacillus proteus, diphtheria, and tuberculosis may occasionally show branching threads, and the latter has been described as showing figures almost indistinguishable from those of actinomycosis.

Of the genus streptothrix there are probably many species showing more or less marked morphological and cultural differences, as is well instanced in the now numerous streptothricæ found in the lesions of actinomycosis and in the description of the various streptothricæ in the above-mentioned cases. Some are readily cultivated; others can only with difficulty be grown on special media. Of most importance to the clinician is the ap-

pearance of the mycelial tufts or granules in the discharges from the lesions, and the ready demonstration of the organisms therein. Many of the organisms are very resistant to acids and stain well by the stains used for detection of tubercle bacilli. Others are less resistant and are better revealed by Gram's stain. It is possible and probable that many instances of streptothrical pulmonary infection have been passed unrecognized, the organisms either having been considered tubercle or not having been revealed at all.

To these reported instances we wish to add the notes of two cases, one of which, though incomplete from lack of post-mortem observation, is yet of interest as demonstrating the possibility of recognizing the more or less obscure conditions met with in a pulmonary streptothrical infection; the other as showing the doubtful symptoms and rapid course of a localized cerebral infection by these organisms. The cases described so far in this country have only been recognized at autopsy. One may, however, as in the first case and in those of several of the foreign authors, detect the organism in the sputum and at least presuppose the nature of the infection.

CASE I.—J. T., aged thirty-seven years, male, married; very active in business; under the care of Dr. Dercum for mental disorder of several months' duration. I was asked to see him September 25th because of slightly increased respiration, pulse rate, and temperature without apparent cause. Physical signs of bronchitis of very moderate amount were found. A slight morning cough was observed. The temperature until October 30th was about $99^4/_5°$ to $100^1/_5°$ in the evening; the pulse 100 to 125. The mental symptoms, confusion, and some excitement continued. He gradually became more dusky and the respirations more frequent. He had sweats during this time, and lost weight. The physical signs of bronchitis became more marked and the heart became dilated. On the evening of October 30th the temperature began to rise, reaching 104° November 3d. Physical signs of broncho-pneumonia developed, and death took place November 6th from exhaustion, due to dilated heart, which also caused edema of the lungs. The blood, the urine, and the sputum were examined as frequently as the state of the case permitted. Of the first two nothing could be obtained to throw light on the case. The urine was always of normal specific gravity; contained a trace

of albumin, no sugar, and few hyaline casts. The blood did not show leucocytosis. The one count reported is typical of all. The hemoglobin was 80 per cent.; red blood-corpuscles, 4,572,000; white blood-corpuscles, 3200. Of the whites there were: polymorphonuclear, 79 per cent.; small mononuclears, 17 per cent.; large, 3 per cent.; transitional, 1 per cent.

The sputum was studied most carefully by my associate, Dr. Norman Gwyn, and to him I am indebted for the suggestion of the nature of the infection. His report is as follows:

The *sputum* first obtained was small in amount, yellowish, homogeneous looking; not foul, and contained no blood. No granular masses were present. Unfortunately, after the second day the stuporous condition of the patient seemed to prevent the collecting of pulmonary discharges, the later specimens being only nasal mucus and buccal secretion. The first examination showed apparently a few thin tubercle bacilli, retaining faintly the red stain of carbol-fuchsin after counter-staining with Gabbett's methylene blue. Owing to the filiform appearance of one of these, further examination was made and revealed, in addition to small rod-like forms, some definite branching structures resembling those pictured by several of the before mentioned authors. No rosettes or club-like bodies were present. Many presented bevelled ends and were present as short filaments. By Gram's stain principally rod-like forms, containing the round coccus-like bodies (polychromatosis), were to be found. Some showed true branching. The organisms were extremely few. The rod-like forms, *by themselves*, could readily be mistaken for tubercle bacilli. Only in the specimens stained by Ziehl-Nielsen and Gram's method were definite streptothrical filaments found. Great numbers of streptococci and pneumococci (?) were present, which caused the death of a guinea pig in ten days without any signs of streptothrical or tubercular lesions. As I have mentioned, after the first two days no true sputum was obtained. After the second day the nasal and oral secretion showed no organism like those found in the specimens of the first days. Cultural experiments had no results. The definitely branching structures and the appearances presented by Gram's and Ziehl Nielsen stain, together with the resemblance to previously described streptothricæ, induced us to suppose that we had to do either with a primary streptothrical infection or one secondary to a streptococ-

cus infection of the bronchial tract. The possibility of these organisms being branched forms of the tubercle bacillus must also be considered.

Case II. is of extreme interest, and is the first of its kind to be reported in this country. It is, however, a very accurate picture of that described by Sabrazes and Riviere, and is very similar to those of Eppinger, Ferri and Faguet, Aoyama and Chiari. Clinically it is of importance as showing how large an area of the brain can be affected without giving rise to localizing symptoms, and how difficult the diagnosis of such condition may be. Further, it may explain the nature of some of those instances of cerebral infection, particularly abscess, in which neither by culture nor by animal inoculation can an infective agent be discovered.

The history of this case was as follows:

C. H., single, aged twenty-four years. Complaining of an attack of loss of consciousness, with later nausea and vomiting. His father had died of pulmonary tuberculosis. He had always been fairly well; habits good; had gonorrhea some years ago; no lues; no history of lung trouble; no ear disease. Had some small operation on nose recently.

Was quite well up to Wednesday, February 6th, when he had severe headache. The following day while at work he felt uncomfortable, and in a few moments lost consciousness, falling to the floor and biting his tongue. He was quite alone, so that nothing further than this could be ascertained. The patient felt dazed and stupid and noticed numbness of right arm and leg, with some twitching of these members. On Friday he felt better; on Saturday and Sunday he was much the same. On Monday, the 10th, another attack distinctly convulsive and resembling epilepsy occurred. The numbness of right arm and leg was a little more pronounced, and the occasional twitching was evident. There was slight headache, no chills, no cough, no pain or discharge from the ears, no eye symptoms.

Seen by Dr. Dercum at this time, no definite localizing symptoms could be made out. Present condition persisted. There was no fever. The patient remained fairly well and was conscious. Pupils were equal; tongue heavily furred. The pulse was fair and the patient seemed improving. There was, however, slight hyperesthesia of the right side.

On Wednesday morning about 9 o'clock, after a fair night, there was, according to the nurse, a sudden collapse. The pulse could not be felt at the wrist. When seen half an hour later the pulse was very slow (30 to 50), very irregular, but of fair volume. The patient was semi-conscious, answering only when shouted at. The patellar reflexes seemed exaggerated, especially on the right side. There was marked hyper-extension of both feet. The Babinski reflex was marked on the right leg; Kernig's sign well marked; very decided ankle clonus. Heart, lungs, and abdomen negative. Feces and urine were being passed involuntarily; some cyanosis of the nose and ears beginning. There was no rigidity of the neck, nor any tenderness over the skull. The examination of the eyes by Dr. de Schweinitz showed deviation of the left eye; pupils negative; very marked edema of the disks, probably due to meningitis. The patient was unconscious by evening; pulse was irregular and variable; distinct Cheyne Stokes respiration. Prof. Hare joined in the consultation.

Lumbar puncture was performed. Two ounces of turbid fluid contained a few leucocytes, but no bacteria were obtained. There was immediate improvement, the patient regaining consciousness and remaining so until 6:30 next morning, Thursday. Lumbar puncture was repeated, with no improvement. The patient lapsed again into a semi-conscious state; rigidity of the right side became quite marked. Occasional convulsive movements were, however, sometimes seen on the left, and a general convulsion, apparently of pontine origin, occurred. The hyper-extension of the feet was extreme, the dorsæ of the feet being level with the tibiæ. No rigidity of the neck; reflexes still exaggerated; Babinski's reflex still present. The patient gradually failed, dying at 6:30 P.M. on Thursday, one week from the onset of the first convulsion.

The temperature, though subnormal at first, began to rise in the last three days, and for twenty-four hours before death was between 103° and 105°. The pulse increased in frequency meanwhile, but lost very much in volume. Apart from the slight deviation of the left eye, slight impairment of sensation on right side, no paralyses or localizing symptoms were observed.

The autopsy and the histological, cultural, and experimental examinations were made by Dr. R. M. Pearce, to whom we are indebted for much care and great skill in prosecuting the inquiries.

Head only examined. Scalp and calvarium not noteworthy. Dura mater normal; pia normal; posterior and upper portion of upper hemisphere prominent. At a point just posterior to upper portion of vessel of Rolando is an area 3 cm. in diameter, which is fluctuant, grayish-yellow in color. On section there is found at this point, principally in the white matter of the hemisphere, but also involving the cortex, a cavity 3½ cm. in diameter, containing a thick fluid, the first portion of which to escape is chocolate colored; the remaining portion is grayish-yellow and of the consistency of oil. No granules resembling those of actinomyces were present. The cavity is lined by a thin greenish-gray necrotic membrane, beneath which the brain tissue is much injected. The odor of this pus is exceedingly foul. Brain tissue surrounding abscess for the distance of 2 to 3 cm. is softened and yellow in color, though there is apparently no direct extension of the inflammation.

Microscopically there is no inflammation of the pia over abscess. The rest of the brain on section is normal. There is no evidence in the vessels of the brain of arterial disease, thrombosis, or embolism. Bony ears are normal, and nowhere in the skull is there evidence of necrosis or bone disease.

Smears from the abscess contents showed no tubercle, and only after prolonged search and staining by carbol-fuchsin, followed by Gram's solution and decolorized by anilene oil, could anything be made out. In one of these specimens was found a large ball-like and tangled mass, made up of long, thin filaments, staining irregularly. There is some suggestion of branching at the periphery of this mass. Only the one clump of these organisms was found. Cultures, aërobic and anaërobic, were quite negative.

Inoculations of two guinea-pigs were made, subcutaneous and intra-peritoneal. The first of these died in nine days, nothing suggestive being found; the other being killed after thirty-two days, and showing nothing but a few miliary nodules at point of inoculation in the peritoneum. No evidence of tuberculosis in either animal. Cultures from both were negative.

A histological examination of the abscess wall showed the inner edge to be composed of necrotic pus cells, indicating its chronicity, the deeper layer of fairly-well preserved pus cells, lymphoid cells, and occasional endothelial cells. In the adjoining brain tissue lymphoid and plasma cells were quite numerous. About

the blood vessels at periphery of abscess are many lymphoid and pus cells. The surrounding brain tissue shows degeneration with polymorphonuclear leucocytes. No evidence of tubercles or tubercle bacilli.

Sections stained with carbol-fuschin, potassium iodide, and iodine and aniline oil show in one spot a large mass of threads radiating from a common center. At the periphery, where the arrangements of individual elements are loose, they appear as long, thin threads, with small, irregular staining. The general appearance is that of the center of a colony of actinomyces. No clubs or rosettes are, however, present. Along the edge of abscess wall a few single threads, similar to those in the original smears, were found.

A Wise Act.—The Tennessee Legislature has passed the following act and the Governor has signed it; it is a law. The State of Missouri should follow the example and at the next session pass a similar law.

AN ACT TO PREVENT THE SUBSTITUTION OF ANY DRUG IN FILLING PHYSICIANS' PRESCRIPTIONS BY DRUGGISTS IN THE STATE.

SECTION 1. Be it enacted by the General Assembly of the State of Tennessee, That it shall be unlawful for any corporation, firm or person, or any combination or association of corporations, firms or persons, engaged in the business of buying, compounding and selling drugs and medicines to substitute any drug or medicine in lieu or instead of that given to the patient by the physician on the face of his prescription.

SEC. 2. Be it further enacted, That it shall be unlawful for any agent or employee of such person, firm or corporation, or association or combination of persons, firm or corporations, engaged in the business of buying and selling drugs in this State, to substitute any medicine for the specific medicine mentioned in the physician's prescriptions.

SEC. 3. Be it further enacted, That any person, firm or corporation violating the provisions of this act, or aiding or abetting the violations of the same, shall be guilty of a misdemeanor, and upon conviction shall be fined not less than $25 nor more than $100 for each and every offense.

SEC. 4. Be it further enacted, That this act take effect from and after its passage, the public welfare requiring it.

CHRONIC GASTRITIS—REPORT OF A CASE.*

BY DR. CHAS. J. POLLARD, PRINCETON, KY.

Chronic gastritis is a condition of the stomach almost daily met with in this country in a more or less well developed form, and to successfully treat these cases as they come to us is a goal we all desire to reach.

This disease is almost invariably associated with more or less indigestion, manifested by many protein symptoms and accompanied by more or less active vomiting of the ingested materials.

The gastric secretions are almost without exception abnormal, many fermentative changes taking place in stomach contents, thus necessitating lavage more or less frequently for its relief.

The report and treatment of the following case, while not strictly in accord with true homeopathic prescribing perhaps, was so prompt in effect and has proven so lasting in results that I shall be willing to shoulder any censure that may be heaped upon me.

On May 21, 1900, Mr. H. came to me from an adjoining county and applied for treatment, having been through the hands of two old school physicians in the last four years.

His age, 57; average build, lean, languid, dull, expressionless eyes, coated tongue, dirty, sallow-colored skin; gave history of indigestion for last four years, characterized by eructations of sour materials, pain after eating, nervous depression, sleepless nights, constipation alternating with occasional attacks of diarrhea, vomiting, not marked, loss of flesh, weak pulse, flabby muscles; in fact, a typical case of gastric catarrh in its chronic form.

From the history of treatment and the many symptoms pointing to the drug, I prescribed nux vomica and diluted muriatic acid after meals, believing the digestive fluids deficient in quantity. The patient reported some improvement in two weeks, his medicine was repeated, and he was cautioned about diet, as formerly.

He reported again on the 21st of June, 1900, and gave history of an attack of rheumatism one week before, but still improving slowly of his stomach trouble.

In the meantime I had been studying this case arduously. I

*Read before the meeting of Kentucky State Homœopathic Medical Society, May 29, 30, 1901.

read of a case having been successfully treated with hydrozone and glycozone; then I concluded to use these adjuvants when patient returned.

Owing to impossibility of regular lavage, I furnished patient with two ounces of hydrozone and directed him to add one ounce to a quart of sterilized water and take half a tumblerful half an hour before meals.

This, you will perceive, would procure a clean surface for the oncoming meal, though for the first days it produced some discomfort he said from accumulation of gas.

Immediately after meals he was ordered to take a teaspoonful of glycozone in a wineglassful of water and three grains of nux vomica.

The next report was the 16th of July, when the improvement was very marked in his general appearance; patient was then able to eat without any dread of pain or discomfort.

Prescription was repeated, and by August 1st all signs of any lesion of stomach had disappeared. Patient claimed to be well for the first time in four and one half years.

Treatment was discontinued of course. I saw this patient recently and he had practically no trouble last August.

Dr. Finlay Ellingwood, in his excellent Materia Medica, says glycozone is one of the best manufactured products of the present time in its action upon enfeebled disordered stomachs, especially if there is ulceration or catarrhal gastritis.

It is a most efficient preparation and I shall use it freely in the future.

The 1876 Class of the Department of Medicine of the University of Pennsylvania held its first annual banquet at the University Club, Philadelphia, at 7 P M., on Alumni Day, the 11th of June, and effected a permanent organization for the benefit of its Alma Mater.

The following officers were elected: President, Charles A. Oliver, A.M., M.D.; vice-president, William H. Klapp, A.M., M.D.; secretary, Francis M. Perkins, A.M., M.D.; treasurer, Benjamin F. Baer, M.D., with an executive committee of twelve members who will meet at the call of the president.

INDICATIONS FOR CÆSAREAN SECTION IN PLACENTA PREVIA.*

BY G. M. BOYD, M.D., OF PHILADELPHIA, PA.

Obstetric surgery has been so greatly perfected within the past two or three decades that we may hope soon to report results equal to those of general surgery. The practitioner of medicine whose specialty is obstetrics (more mindful of the child's interests than ever before) studies his cases with greater care. He is alive to the fact that at times the mechanism of labor is a difficult problem to solve; that he must be prepared by his own surgical training to assume the responsibility of a major operation or else call in assistance. In no department of medicine is the responsibility greater, for he has the lives of two to care for. At no other time is more deliberate and intelligent action demanded. He who would serve his patient best, will study his case with the greatest care; his operative interference will then be anticipated, not performed as a dernier resort.

The success attending the modern Cæsarean section to-day has been brought about more by the careful study of each case, in which it seemed to be indicated than by the individual skill of the operator. That careful study enables the operator to determine upon the right course to pursue before the patient has become exhausted by a long labor, or before the child's life has been jeopardized by injudicious traction with the forceps.

The Cæsarean section has a low mortality and morbidity if performed when the patient is in good condition. In the past, the operation has been performed chiefly for obstructed labor, but we believe that the day will soon come when it will be more frequently resorted to. As the forceps have been styled the child's instrument, so will we conserve the interests of both mother and child by abdominal section.

Dr. Edward Reynolds concludes an article on the Cæsarean section with the following statement: "Is not the life of the child as good a reason for the performance of a simple abdominal operation as the chronic backache for which such operations are done daily?" The classical Cæsarean section admits of an increasing field of usefulness. It was but natural for those interested in midwifery to expect to soon hear of the operation resorted to for other grave complications, eclampsia, prolapse of the cord, placenta previa, etc.

*Read before the Philadelphia County Medical Society, March 13, 1901.

The purpose of this paper is to consider the treatment of placenta previa by Cæsarean section. Are the methods of treatment usually resorted to to-day satisfactory? Donoghue (*Boston Medical and Surgical Journal*, vol. cxliii., No. 23), in a paper on this subject, states that "the treatment of placenta previa by manual dilatation followed by version, is almost universally practiced to-day by English and American obstetricians, and has shown in the hands of experts a steadily decreasing maternal mortality; but it can hardly be called an ideal treatment, since while it has reduced the maternal mortality to probably the lowest point obtainable (about 12 per cent.), it has done so at the expense of the fetus." He urges "that the treatment of placenta previa in the past has not taken sufficiently into consideration the fact that two lives are involved, and while craniotomy has become a thing of the past, and its performance on a living child is not justified by many men to-day, there is not the same feeling about the induction of labor, or the resort to severe operative delivery, which no less surely than craniotomy takes away the chance of life from the child." Lusk, in 1887, speaking of craniotomy, said: "If it were proposed to a physician to beat out the brains of a newborn child with a view to diminish the perils of the puerperal period, the proposition would certainly be rejected as too horrible for consideration, even though the physician was convinced that the theoretical ground for the recommendation was correct. Yet there seems to be a prevailing disposition to treat any hesitancy to destroy the unborn child, in the interests of the mother, as pure sentimentality." Blackner, whose results with version show the lowest mortality of reported cases, says: "The safety of the mother is, of course, of paramount importance, but a mode of treatment which does not in any way tend to lessen the already numerous dangers to the child's life cannot be called an ideal one. We are justified, then," he continues, "in considering any method which may diminish the risk to the child, while at the same time it does not increase the risk to the mother."

The Frequency of Placenta Previa.—It would seem from a review of the literature that placenta previa is more frequently met with to-day than in the past, or is this discrepancy due to our inability to obtain accurate reports? Lusk states that "fortunately placenta previa is of rare occurrence. In the first 1600 confinements of the New York Emergency Hospital there was not

one case recorded." The text-books claim a frequency of about 1 to 1,000. On the other hand, in a recent report of Chroback's clinic (*Monatschrift für Geburtshil feund Gynäcologie*, No. 5), there were 216 cases in 30,796 confinements. Thus its frequency was 1 case in 143 deliveries.

In a review of the records of the Philadelphia Lying-in Charity we find in 2,887 confinements a frequency of 1 case in 170 deliveries. This rather high percentage of cases may be due in part to the fact that the charity does a large emergency work, receiving many cases in labor.

Maternal Mortality.—Lawson Tait (*Lancet*, February 11, 1899) quotes Simpson as giving the maternal mortality in placenta previa at 40 per cent., and then goes on to say: "I gather from the smothered confessions of other writers and the open admission of my friends who have had large obstetric experience, that it really is much higher, and in spite of the sound principles laid down for its treatment it is probable that more than half the cases die." Wenning (*American Journal of Obstetrics*, October, 1897), in an article on the treatment of placenta previa, states that maternal mortality in a number of recorded cases has been decreased to the encouraging figures of from 4.5 to 7 per cent., yet the general fatality in unselected cases still reaches the high figure of from 25 to 33 per cent. In consulting the report of Croback's clinic we find in 216 cases the mortality of 9.3 per cent. In the 17 cases treated at the Philadelphia Lying-in Charity a mortality of 23.5 per cent. It would seem then, notwithstanding the excellent results achieved by Braxton Hicks' method of bi-polar version or by manual dilatation followed by version, that the maternal mortality cannot be considered less than from 10 to 12 per cent. This estimated mortality we believe is low, when we remember that as a rule only cases of immediate death from hemorrhage are recorded as due to placenta previa. It may not include the deaths from sepsis or those of postpartum hemorrhage, due to extensive injuries of the uterus and cervix in consequence of version. It would be difficult to determine also the percentage of cases which, although they escape death, suffer from a long invalidism, the result of hemorrhage or infection.

Fetal Mortality.—It is the high fetal mortality in placenta previa, the necessity of sacrificing the life of the child to save the mother, that makes us hopeful of better methods of treating

this variety of ante-partum hemorrhage. The text-books give the fetal mortality at 75 per cent. In Croback's clinic the mortality was 83 to 85 per cent. At the Philadelphia Lying-in Charity the mortality was 81 to 85 per cent. It would seem from these figures that the methods of treating this trouble usually resorted to to-day are far from satisfactory, and that in the interest of the child we are justified in considering any method of operation which will reduce fetal mortality without increasing the risk to the mother.

Indications for Cæsarean Section.—If the mortality of Cæsarean section is less or even not greater than the mortality of the usual methods of treating placenta previa, then for the child's interests it is indicated in certain cases. We believe that it has a lower mortality; that it will not only save the child, but prove a most efficient method of rapidly checking hemorrhage. The bleeding from placenta previa may appear at any time after the formation of that organ. The writer's earliest case was in a gestation of four and a half months. Here the patient had bled to an alarming degree in spite of a careful tamponing of the cervix and vagina. Under ether a central implantation was diagnosed. It was necessary in the treatment of the case to first strip off and remove the placenta. Early hemorrhage, is, however, rare. In at least 80 per cent. of cases it does not appear until after the viability of the child, and in about 75 per cent. it appears only a few days before term. The maternal mortality in placenta previa is in part due to the prolonged use of temporizing treatment. The patient loses a large amount of blood before active interference is instituted.

Conclusions.—We would recommend an immediate examination under anesthesia of all suspected cases for the purpose of: (1) Confirming the diagnosis; (2) determining the variety of the previa; (3) the size and position of the fetus; (4) the condition of the cervix; and finally, to facilitate the introduction of the cervical and vaginal tampon. If the hemorrhage appears before the viability of the child, if the previa is marginal, the cervix dilatable, the fetal heart absent, then version or forceps may suffice.

If, however, the child is viable, the previa complete or partial, the cervix rigid or the fetus transverse, then in preference to other interference the Cæsarean section would seem indicated.

REMARKS ON TUBERCULOSIS AND ITS TREATMENT.*

BY DR. BARADAT,

Consulting Physician at Cannes (French Riviera).

In the case of tuberculosis, as in that of every infectious disease, two factors must be taken into consideration.

The first of these is the infectious agent, the morphological and biological characters of which are so well known nowadays; the second is the soil which the agent has developed itself in, and whose characteristics are either acquired or hereditary.

All rational medication must, to be complete and really efficacious, apply to these two factors, and take into account all the elements which arise in a given case. For, as Leudet says, tuberculosis presents, in its varied manifestations, special idiosyncrasies, differing absolutely from one individual to another.

Under these conditions only can we hope to be victorious over this dread disease.

As a matter of fact, a review of the new methods of treatment employed in dealing with tuberculosis reveals to us the fact that, although these methods are, without doubt, of real value, they are only efficacious against certain given systems, and possess no influence over the whole of the phenomena which are to be overcome; certainly, they have special indications, but they are insufficient, because their field of action is but a limited one.

Amongst these indications, the comparative effects of which we shall examine later on, some are destined to improve and to strengthen the soil, others, on the contrary, are specific agents; they give rise to the diapedesis of the white globules, thus multiplying the means of defence with which the organism is provided in its struggle against the bacilli.

A thoroughly rational treatment should take both factors into account; that is to say, the medication employed should act in two ways, both as a dynamogenetic agent and as a specific. One is generally inclined to look upon each new method of treating tuberculosis as one that will immediately effect a radical cure of this terrible disease, without taking into account either the infectious agent and its toxine, or the soil on which these latter react.

We must oppose this tendency, and attempt a true, careful, and impartial appreciation of the new medications.

*Read before the British Congress on Tuberculosis for the Prevention of Consumption, July 22-26, 1901.

Let us, for instance, take the case of an anemic patient: the Koch bacillus has invaded his organism, but still remains latent; if we leave this patient to himself his anemia will increase, his digestive activity will diminish, his strength dwindle away, and assimilation will be reduced to a minimum; there will be, as has truthfully been said, a failure of the whole organism.

What must be done to meet such a case?

Firstly, the organism must be strengthened, nutrition favored; it is here that a use is found for medications tending to produce these effects, such as arsenic in its more easily assimilable forms (cacodylates), tannin, iodine, cod liver oil, salt lotions, alcohol frictions, sea-baths, a hygienic treatment.

By these means the bacilli will be kept under, their action neutralized, and as long as an equilibrium is maintained between the means of defense and the attack the patient will live.

But a fatal time will come when the bacilli will gain the upper hand, and this under the influence of varied causes, to which an organism already infected will have to pay a large tribute, such as physiological troubles, grief, repeated bronchitis, influenza, measles, scarlatina, and, especially in the case of young subjects, intense physical and intellectual strain—too much bicycling, too much fast living, an excess of emulation and rivalry in examinations and competitions.

So that this treatment of the soil, if we may be allowed the expression, which seemed at first so efficacious, had but an ephemeral effect: enough had not been accomplished, the disease should have been attacked in its very essence, the bacilli and their toxines destroyed.

It is the same with all medications in the case of tuberculosis, and I should willingly call them partial medications.

Let us consider those that address themselves to the soil, the constitution of the subject.

Firstly, we hold that a hygienic treatment should be the basis, the indispensable foundation-stone of every medication; without it, they will all fail.

As Professor Letulle so picturesquely puts it, the patient must be "*centrifuged*," he must be taken away from large towns, from the centers where diseased persons are collected; he must be given the pure, fresh, invigorating air of the seaside or of the mountains; he must have in profusion sunlight, an agent as salutary to man as it is destructive to microbes.

In our opinion, this hygienic treatment will best be realized by means of *free sanatoria*, Landouzy's home sanatoria, such as we find them scattered, in the shape of villas, along our sun-bathed Mediterranean shores. There all the required conditions, not only hygienic, but moral and inspiriting as well, can be fulfilled.

In private sanatoria for the rich, the culinary arrangements for such a large number of people are necessarily unsatisfactory, the cooking is less carefully attended to, the dishes less carefully prepared, and less adapted to individual wants, to stomachs often fatigued and upset. As a matter of fact, the question of food is of vital importance in the treatment of a disease in which superalimentation plays such an important part.

The private sanatorium should be reserved for the impulsive, for those who are incapable of energy and self-direction.

Besides, how many of these sanatoria are carelessly conducted! How many paying sanatoria are under the control of commercial managers, who allow alcohol in all its forms to be freely distributed! who close their eyes to promiscuities which are dangerous, often immoral, and always harmful to patients who must carefully husband their strength.

On the contrary, we willingly acknowledge the usefulness of the sanatorium destined to the poor. In their case, hygienic discipline will always be maintained, for there will be no reason for unbending before the perspective of rapid gains and big dividends; on the other hand, the poor will always find at a sanatorium better feeding than at home.

As for the medical treatment, much has been said of cacodylate of sodium.

We shall not attempt a complete study of this substance. The most important thing for us is to be thoroughly acquainted with its real value. Its action and its efficiency must be measured by the light of the experience of numerous observers, and of our own. Its promoters were wrong, in our opinion, to call cacodylate of sodium a specific agent against tuberculosis. As against the numerous favorable observations, and which we do not doubt in the least, of Messrs. A. Gauthier, Renaut, Rendu, Letulle and others, we have to set off many others, equally unimpeachable, and where the results on tuberculosis have been *nil*.

In the course of our practice we currently employ cacodylate of sodium; its effects have proved excellent in cases of anemia, of

ganglionic and lymphatic persons, of chlorosis; in such cases, we have observed a regular revival of the physiological functions, an increase of appetite, a resorption of ganglia. On the contrary, we have obtained less favorable results in cases of ulcerous and cavitary tuberculosis.

Burlureau, in a recent and thoroughly complete study on cacodylate, has come to the same conclusion. "As for tuberculosis," he says, "I regret to have to say that, contrary to the opinion of Professor Gauthier, it is in this disease that cacodylate has given me the least favorable results. Out of twenty-nine cases of pulmonary tuberculosis I have only once obtained a really favorable effect, and that was but temporary."

Cacodylate will be specially useful for the predisposed, for those incipient cases which were so difficult to diagnose, and which we have now learned to recognize."*

As for the vanadates, they have not fulfilled the expectations formed of them; but this is partly due to the difficulty experienced in obtaining thoroughly determined products.

The same must be said of certain artificial serums, which must be classed among the soil strengtheners, and are wanting in bactericidal powers, or rather in the power of exciting diapedesis and phagocytosis.

We now come to the raw meat treatment.

The experimental researches of Richet and Héricourt have proved that raw meat juice acts, not as a strengthening agent, but as an antitoxine. This antitoxine would neutralize the effects of the tuberculosis toxine.

This juice is the muscular plasma, obtained either by the press or by congelation followed by rapid thawing of the muscular tissue.

*For instance, Landouzy, Grancher, Sanchez have revealed to us the delicate stethoscopic signs of the period of germination; Bard and Faisans have showed us the importance of the cardiac rhythm, of tachycardia; Roussel and Boix that of the scapulo-thoracic amyotrophia; Bouchard, Beclerc, Kelsch, Maragliano have taught us the radioscopic signs of incipient tuberculosis; Arloing, Mongour, Courmont have established on a sure basis the early diagnosis of tuberculosis by sero-diagnosis by agglutination; Albert Robin and Binet give us the same certitude by the analysis of the respiratory chemism; Sirot and Fink by the observations of the effects produced by injections of artificial serum; Gaube (of Gers) by the study of the demineralization of the tissues.

The following is the method I have adopted at Cannes in the case of patients whom I submit to this treatment: the daily quantity of mashed meat is 800 grms. (28 ozs. about); the patient takes as much as he can, the rest of the meat is pressed in order that the juice may be extracted.

The plasma must be taken immediately after having been prepared, otherwise one risks swallowing a putrefied and toxic substance.

Although this method has given me excellent results, I consider it difficult to put into every day practice.

It possesses many inconveniences; for one thing it is not within everybody's reach; it is costly in preparation, and requires 800 to 1500 grms. of meat daily; it is supported with difficulty by many patients; it requires constant supervision, for this meat juice soon putrefies and becomes toxic. Injected under the skin of an animal it causes death in a few minutes.

Experiments with this anti-tuberculous plasma have been made in the laboratory of Messrs. Richet and Héricourt. These attempts at hypodermic injections of an immunizing and even curative liquid led us to read once more the already old but very complete works on the bactericidal or antitoxic properties of the blood of animals that are refractory, or seemingly refractory, to tuberculosis.

The medical literature of 1890 to 1895 shows us how this question has been strenuously discussed and deeply criticised.

However, from these works we glean the following fact: that the blood of certain animals confers on other animals immunity from tuberculosis, and may even cure this disease. "As far back as 1888," says Professor Bouchard, in writing to Mr. Bertin, one of the promoters of anti-tuberculous sero-therapy, "I expressed the idea that vaccines were destined to play a part, not only in the prophylaxis, but also in the treatment of this disease."

For my own part I have no hesitation in attaching myself to the method of anti-tuberculous sero-therapy introduced, at about the same time, in 1889, by Richet and Héricourt, and by Bertin and Picq, for I think that therein lies the solution, so long sought, of the problem of the cure of tuberculosis.

Naturally, with this medication just as with any other, we must not wait for the patient to be emaciated, to present digestive troubles and cachexia before treating him.

For, we insist on this point, tuberculosis is not consumption. A consumptive or pthisical person is one in whose case the Koch bacillus, after having terminated its progressive career, has slowly brought on the suppurative destruction of the cells attacked, and in this mass of destroyed matter you will find all the processes provoked by the staphylo-, the strepto-, and the pneumococcus, working together with the Koch bacillus.

In this case you have phthisis, consumption, the hectic fever which brings on a fatal issue; imagine that, by some means, you could at this period destroy the bacilli of tuberculosis, your patient would still succumb to the strepto-, the staphylo-, and the pneumococcus.

As a matter of fact, says Landouzy, it is this idea of helping those who are in the incipient stage, at a time when the germs of secondary infection have not yet attacked them, that has led medical men to make use of "the immunizing agents that are antitoxic or bactericidal owing to their strengthening action on phagocytosis."

This science of sero-therapy, which we owe entirely to the French school, has been perfected by Pasteur's most renowned disciples, by Drs. Duclaux, Roux, Grancher, Nocard, Metschnikoff, Yersin, Calmette, Leroux, Charrin, Marmorek, Boinet, and many others, among whom we must mention Bertin and Picq, who were, together with Richet and Héricourt, the promoters of modern sero-therapy.

The use of natural serum has given me unexpected results in serious cases of tuberculosis, and I have always been surprised to find that this method of treatment is not better known; natural serum seems to me to fulfill all the required conditions, for it is both dynamic and bactericidal.

As we know, in the case of tuberculosis, the bacillus acts as a destructive force, but its action is strengthened by that of other destructive forces due to the soil. In one case it will be anemia, in another heredity, in another influenza, or intellectual or physical strain.

So, with these generalities, what are the characters required of a therapeutic agent against tuberculosis? We admit the stimulating and regenerative properties of the general tonics, cacodylates, phosphates, cod liver oil, etc.; we will even allow the antitoxic property of meat juice, but has anyone the right to say that

each of these agents fulfills the two conditions necessary to the cure of tuberculosis? Certainly not, for they are either simply stimulating and strengthening, or simply antitoxic. Bertin and Picq's serum (goat's serum) seems to me, on the other hand, to be at the same time tonic, antitoxic, and bactericidal; it is the one we make use of.

As a matter of fact, daily experience tends to prove that every serum is dynamogenetic, and therefore a general strengthening agent.

This is proved daily by the use of artificial serum in the case of serious hemorrhage, of anemia subsequent to chronic diseases, of traumatic shock consecutive to operations. In taking into account, however, the comparative value of the two serums, natural and artificial, we find that a very small quantity of the former produces an intense therapeutic effect, whilst the same effect can only be obtained by employing a double or even triple dose of artificial serum. There is here a *quid divinum*, due evidently to the intimate composition of natural serum. No one nowadays denies the dynamogenetic action of serum—it is a recognized fact.

All we have to do is to repeat this action as often as required in order to maintain to a remarkable degree the resistance and the vitality of the patient.

Whilst awaiting experiments destined to throw light on the still obscure question of the mode of action of serums, we give preference to the theory propounded by Metschnikoff, who looks upon them, not as antitoxic, but as stimulating agents of phagocytosis—in other words, as *stimulines*, provokers of organic resistance.

Therefore, as we admit that the microbial destruction and the arrest of infection are due to phagocytosis, the aim of our therapy must be to increase the activity of the phagocytes, in order that they may the more easily accomplish their mission. Moreover, the happy results that we have obtained this winter by means of natural sero-therapy lead us to believe that this is the real and only effective method of realizing the cure of tuberculosis, especially in its early stages, now that the means of diagnosis which we possess permit us to discover the very earliest symptoms of incipient tuberculosis.

This treatment is absolutely innocuous and easily applied; one

hypodermic injection of two cubic centimetres every other day. In some cases, however, in the case of nerve patients especially, I have observed after each injection an exaggeration of cellular activity, showing itself in the shape of fever, erythemia, and dyspnea; in such cases I administer the serum internally. But in order to obtain the same tonic and stimulating effects I have to increase the dose, and administer ten cubic centimeters instead of two, as in the case of hypodermic injections.

These results agree with those obtained by Grasset, who concludes by saying that the administration of serum internally is the method of choice, because it is free from danger and gives rise to no accidents. Nevertheless, even with Bertin's serum, we are of opinion that the cacodylate medication should be employed as a precious adjuvant in most cases on the same level as tannin, iodine, and cod liver oil.

The Social Evil in Tenement Houses.—The Committee of Fifteen, which is now trying in a practical way to bring about some reforms of vice in New York City, has taken up the subject of prostitution in the tenement houses of that city. In a letter recently written to Governor Odell it says that the existing condition of affairs is not only deplorable, but intolerable. It seems that the practice of prostitution has become very prevalent in these overcrowded tenement houses. The committee draws attention to the fact that the most shocking feature of this evil is the prostitution of young children. Women of ill-repute find shelter in these houses, where they are apparently exempt from police surveillance, and here they sow the seeds both of vice and the venereal diseases in a promiscuous population, both of young and old of both sexes. The social evil must be attacked and exterminated in the tenement houses before any permanent control can be gained over it in that city. The committee endorsed the legislation proposed by the Tenement House Commission. We learn from the *Medical Record* that the penalty for allowing any part of a tenement house to be used for immoral purposes is a fine of $1,000, which shall be a lien on the property. This makes the owners of such houses, and not the wretched women who pursue their avocation in them, directly responsible for suppressing this vice.—*Philadelphia Medical Journal.*

THE PRESENT ASPECT OF THE ANTITOXIN TREATMENT OF DIPHTHERIA.*

BY J. DUTTON STEELE, M.D , PHILADELPHIA, PA.

The verdict of the statistical inquiries of the antitoxin treatment of diphtheria of to-day show little change from that of the original collection of cases made in the first three years of its use, and what difference exists is in favor of the remedy. An elaborate analysis of these reports would be out of place in this paper, but it may be well to give the figures of some of the leading statisticiane since the publication of the first series in 1894. Baginsky (Nothnagel's *System*) reports 1500 cases in hospital and private practice, and says that the fall of mortality has been from 41 per cent. to 8 or 9 per cent. The report of the Clinical Society of London (1898) places the pre-antitoxin death-rate at 29.6 per cent., and that of the antitoxin period at 19.9 per cent. Probably the most complete statistics are found in the monograph of Bayeux. He has analyzed 200,000 cases with a death-rate of 16 per cent. Biggs in 1896 published the most complete collection in our own country. Some consideration of his figures may be of interest. In 158 reports he collected 24,768 cases with a death-rate of 16 per cent. The accordance of his conclusions with those of Bayeux is striking. From the same reports Biggs estimates the pre antitoxin death-rate at from 68.7 per cent. to 25 per cent. In these tables the hospital cases number 15,560, death-rate 19 per cent. The cases in private practice number 9,208, death-rate 10.1 per cent. The comparison in 45 double series of cases, in which one portion was treated without the remedy and one with it, the results are as follows: The death-rate of the antitoxin cases was 19.1 per cent., and that of the non-antitoxin cases 37.8 per cent. The day of the disease upon which the injection was given was recorded in 10,425 cases, in which the mortality was 16 per cent. When the remedy was given upon the first day the death rate was 3.5 per cent.; upon the second day, 8 per cent.; upon the third and fourth days, 17 per cent. After the fourth day the death-rate was 34.6 per cent.

It is pleasant to turn to the figures of the committee of the American Pediatric Society, embracing 5,576 cases (moribund cases excluded), collected mostly from the private practice of American physicians, including two rather short series from the

*Read before the Philadelphia County Medical Society, April 24, 1901.

hospitals of New York and Chicago. The mortality was 8.8 per cent.

Cases injected upon the first day gave a death-rate of 4.9 per cent.; upon the second day, 8.6 per cent.; upon the third day, 12.7 per cent.; upon the fourth day, 22.9 per cent.; and after the fourth day, 38 per cent.

The result of this report compares favorably with any that has been published in this country or in Europe.

To illustrate the importance of the need of the early administration of the antitoxin, Baginsky's figures are even more striking. Cases injected upon the first day give a death-rate of from 1.07 per cent. to 2.7 per cent. Cases injected upon the second day give a mortality of 5.7 per cent. to 14.1 per cent. The study of these and other figures has led to the following conclusions:

1. Under the use of antitoxin the death rate has been reduced in round figures to about 16 per cent. against a former death-rate of from 65 per cent. to 25 per cent. In favorable circumstances the mortality is 8 per cent. or lower.

2. The death-rate varies greatly according to the promptness with which the remedy is given. It falls to 3 per cent. or 5 per cent. in cases injected upon the first day, and increases rapidly until it reaches 35 per cent. or 40 per cent., in cases in which injection has not been made before the fourth day or after.

3. Results in hospital practice are much less satisfactory than those in private practice. The reason for this is probably that in former case the patients are seen and injected earlier, probably come from better hygienic surroundings, and show correspondingly greater resistance.

Laryngeal Cases.—In studying the figures of laryngeal diphtheria one is forcibly struck with the fact that the greatest benefit that antitoxin has conferred upon this form of the disease is the reduction of the number that require operation, though its favorable influence upon the percentage of recoveries in operative cases is very decided. Biggs' figures are as follows: In 15,148 cases of laryngeal diphtheria the death rate was 16.6 per cent. against a pre-antitoxin death-rate of 70 per cent. Of these, 12,066 were non-operative (79 per cent. of the total), with a death-rate of 12.7 per cent.; 3,082 were operative (21 per cent. of the total), with a death-rate of 26.7 per cent. The tracheotomies numbered

1,355, death-rate 42 per cent. Intubations 1,173, death-rate 30.8 per cent.

The figures of the American Pediatric Society are 1,704 cases of laryngeal diphtheria, with a death-rate of 21.12 per cent; 668 operative cases (39.21 per cent. of all cases), death rate 27.24 per cent.; 1,036 non-operative cases (60.79 per cent. of all cases), with a death-rate of 17.18 per cent. The American Pediatric Society estimates that formerly the percentage of cases of laryngeal diphtheria which required operation was 90 per cent. These figures show that it has been reduced from 21 per cent. to 40 per cent., and that the lower percentage has been deduced from the larger series of cases. The mortality formerly has been estimated at 73 per cent.; the recoveries now number 73 per cent. The figures are reversed.

The Lesions of the Heart, Kidneys and Nervous System.—Symptoms of heart weakness, albuminuria and paralysis are probably considerably more common since the beginning of antitoxin treatment than in the pre-antitoxin days. At first, as was natural in the use of a strange and new remedy, this was attributed to the antitoxin itself. A more thorough study of the pathological anotomy shows the fallacy in this, however, and renders the increased percentage of complications an argument for the more vigorous use of the remedy and emphasizes the importance of its use at the earliest possible moment. The classical monograph upon the Pathology of Diphtheria, recently published by Councilman, Mallory and Pearce, confirms the scattered observations hitherto recorded, and classifies our knowledge of the subject so as to enable us to state beyond doubt that the viscerial complications are produced, not by functional disturbances, but by the actual organic changes in the tissues brought about by the necrosis producing properties of the toxin.

Again, owing to the reduced mortality, numbers of cases recover that would have died in the pre-antitoxin days. It is self-evident that these cases belong rather to the severe than to the mild variety, and owing to the lateness of the administration of the antitoxin, or to the severity of the infection by the Klebs-Löffler bacilli, the toxin has had an opportunity to cause necrosis in the tissues before the antitoxin could stop formation of or neutralized the toxin. The antitoxin can only arrest such necrotic processes by removing their cause and has no power to bring

about regeneration of the tissue already destroyed. That these cases will suffer from visceral complications is self-evident, as is also the fact that in this way the percentage of such complications will be higher in the non-fatal cases treated with antitoxin than in those of the pre-antitoxin times.

Kidneys.—The percentage of cases showing albuminuria during the course of the disease depends upon the promptness with which the antitoxin is administered. The figures of the Metropolitan Asylum Boards of London in 1879 are as follows: Pre-antitoxin percentage 24.1 per cent.; antitoxin percentage 41.5 per cent. While during the same period the mortality had fallen from 29.6 to 22 per cent.

Heart.—Baginsky makes the significant statement that in pre-antitoxin times only 26 per cent. of the cases with milder cardiac symptoms survived, while under the antitoxin treatment the percentage is 49 per cent. In his experience the heart-symptoms were milder in the antitoxin cases.

In the report of the American Pediatric Society there were 32 fatal cases of cardiac failure during convalescence. Only 1 of these occurred in the cases injected upon the first day, 2 in those treated upon the second day, and 25 in those injected on the third day or after. In 4 the date of injection was unknown.

The following case was under the care of Dr. Musser and myself, and is interesting as illustrating the fact that the early injection of antitoxin can so protect the myocardium of a heart which was the seat of severe valvular lesions and dilatation that the case recovered without signs of undue cardiac weakness.

Mina S., aged nine years, had suffered from valvular heart disease for several years, following an attack of rheumatism. The heart was much enlarged to the right and left, and there were loud systolic and presystolic murmurs at the apex, and a systolic murmur at the aortic area. The child was anemic, bedridden much of the time, and showed the general symptoms of insufficient cardiac compensation. She developed a true diphtheria of both tonsils, confirmed by bacteriological examination. On the evening of the second day she received 1,250 units in two doses. In twenty-fours the temperature fell from 101° to normal. The heart grew steadily stronger. She made a rapid convalescence without complication, and without arythmia or signs of cardiac failure.

Paralysis.—It is probable that antitoxin treatment has not materially affected the frequency of occurrence of post-diphtheritic paralysis. The pre-antitoxin percentage was from 11 per cent. (Sanné) to 14 per cent. (Lennox Browne). The percentage of the American Pediatric Society in 3,384 cases was 9.7 per cent. Here 28 cases occurred in patients injected upon the first day, 73 and 76 in those injected upon the second and third day respectively. The experimental work of Ranson upon rabbits shows that paralysis may be expected after one-quarter of the minimum fatal doses of diphtheritic toxin and can be averted only by large doses of antitoxin given within the first twenty-four hours.

Dosage.—In the first days of its administration the dose of antitoxin was small and varied from 600 units (Baginsky) to 1000 units (American Pediatric Society) for mild cases, and about 1500 units or 2000 units in severe and laryngeal cases. Musser recommends small doses frequently repeated. The English dose was considerably larger, and arouses our suspicions that their serum was not of the standard that it claimed to be. At all events, with their tremendous doses their results, at least at first, were uniformly less satisfactory than those obtained in America or upon the Continent.

As the quality of the serum improved and tended to become more uniform it was used with more confidence, and as it was found that larger amounts could be given with impunity the general tendency has been to employ larger doses. The consequence of this is that one injection given early and containing 1500 to 2000 units is usually sufficient to control the disease, and second injections are not so frequent as formerly. I think, too, that not much modification is made for age, as the greater susceptibility in young children requires a relatively larger dose. Laryngeal cases usually require 2,000 to 4,000 units as an initial dose. In a recent paper McCullom of Boston recommends a minimnm initial dose of from 4,000 to 6,000 units, and in serious cases this is repeated at four-hour intervals until the symptoms are controlled. He seldom gives less than 20,000 units, and oftener more than 70,000.

Immunity and Quarantine.—The value of antitoxin as an immunizing agent has been well established. Biggs collected 17,516 cases, of which 129 were mildly attacked in thirty days,

20 were attacked after thirty days, and in all there were 2 deaths. There are no reliable statistics available to show how long this immunity lasts; indeed, the difficulty in obtaining suitable data is very great. Baginsky places this limit at three weeks. Abbott says it probably does not last longer than a few weeks at most. The dose which was originally placed at 200 to 500 units has advanced, so that now from 500 to 1,000 units are more frequently given.

The following experience in the Presbyterian Hospital during the past winter is of interest in this connection. In the early part of January three or four cases of diphtheria occurred in the children's department, a large circular ward. The question of preventing further cases arose, and the aid of the Clinical Laboratory was requested. A certain portion of the cases received immunizing doses of antitoxin. The writer suggested that cultures be taken from the throats, not only of the patients but of the nurses as well. This was done with the following result: Upon January 17th cultures from 17 patients and 2 nurses showed Klebs-Löffler bacilli in 5 patients and 1 nurse. No more cases developed, and upon January 26th cultures were taken from 4 nurses and 10 patients; 3 of the nurses showed pure cultures of Klebs-Löffler bacilli and 3 patients the presence of the bacilli in good numbers. At no time was there any evidence in these cases of the clinical presence of diphtheria. This was a striking example of the well-known fact, that the Klebs-Löffler bacillus may exist in apparently healthy throats. It has been frequently shown that bacilli may exist for long periods in the throat of convalescents. Thus the average duration in the experience of the bacteriological laboratory of the Philadelphia Board of Health was twenty-nine days from the time of their first observation, with a maximum of 112 days. In the bacteriological laboratory of the Denver Board of Health the average was twenty-two days and the maximum 145 days. The lesson that it seems to me should be drawn from these facts is:

In preventing the spread of diphtheria in any collection of individuals who have been exposed to the disease, the immunizing power of the diphtheritic antitoxin should always be employed, with the additional measure of isolation, and the frequent bacteriological examination of the throats until the absence of the Klebs-Löffler bacillus in all is definitely proven. The reason for

this is, that in some cases it is very probable that the virulence of the bacilli in the throat may outlast the duration of the immunity given by the antitoxin. It is doubtful whether the simple establishment of immunity by antitoxin would be sufficient in many cases to stamp out the epidemic; thus the employment of these other two measures, particularly isolation.

A successful clinical remedy to rid the throat of bacilli is that suggested by Hand, namely, swabbing three successive days with a fresh solution of silver nitrate of the strength of 1 drachm to 1 ounce.

A comparison of the statistics of the four principal cities of the United States are as follows: In Chicago the death rate from diphtheria per 100,000 of the population for the ten years 1886 to 1896 was 12; from 1896 to 1898, 5.2; 1895 was a transition year and cannot be fairly included in either period. In the period from October, 1895, to February, 1898, 4,071 cases were treated by the city with antitoxin with a death rate of 6.5 per cent. In New York the deaths from diphtheria per 100,000 of population were: 1886 to 1894, 15.1; 1896 to 1898, 7.1. The death rate of reported cases of the disease in 1890 was 25.9 per cent. In 1896 it was 15.2 per cent. The health inspectors in 1896 treated 1,172 cases with a death rate of 10 per cent.

In Boston, deaths per 100,000 of population were: 1886 to 1894, 11.8; 1896 to 1898, 10.9. In the South Department of the Boston City Hospital up to 1899, 7,657 cases had been treated with a death rate of 12.9 per cent.

In Philadelphia, deaths per 100,000 of population were: 1886 to 1894, 10.1; 1896 to 1898, 10.7. The average death rate of reported cases: 1890 to 1894, 29.68 per cent; 1896 to 1900, 23.6 per cent. The number of cases treated in the Municipal Hospital was: 1896 to 1899, 3,985; death rate, 24.3 per cent; previous death rate in 1892 to 1894, 25.06 per cent. There have been very few cases comparatively treated by the health inspectors.

While in the pre-antitoxin period Philadelphia's deaths from diphtheria per 100,000 were less than in the other cities, the rate has slightly increased under the antitoxin treatment. We appear at a disadvantage, however, in the percentage of deaths to reported cases and show a fall from 29 per cent. to 23.6 per cent. only. The figures of 1900, however, show a death rate of 17.19 per cent. This is a decided improvement and gives hopes for the

future. Again, we lack the organized corps of inspectors whose duty it might be to give the antitoxin gratuitously. The brilliant results obtained in New York and Chicago from such an arrangement should be an incentive for our municipal authorities to do likewise. The free distribution of the excellent antitoxin prepared by the laboratory of the Board of Health takes the place to a large extent of this system, and when the returns of the cases to which this antitoxin has been administered is published, Philadelphia will doubtless bear favorable comparison with the other cities of the country.

But when all this is said the fact remains that the general city death rate from this disease is not as satisfactory as it should be. With our facilities for diagnosis in our city bacteriological laboratory and our reputation as a medical center, one must feel chagrined that our profession as a whole have apparently not employed the antitoxin treatment with the confidence and energy that are necessary to bring out its life-saving power.

The unfavorable comparison that must be drawn when the statistics of the Municipal Hospital are brought side by side with other hospital death rates may be accounted for in several ways. Of course hospital figures are always worse than those of private practice for reasons given above, but our average death rate of 25 per cent. is higher than those of other similar institutions here or abroad. In one report of the Municipal Hospital (1896) the statement is made that a number of cases were included in the diphtheric death rate that were complicated by measles or scarlet fever. In the reports of other years is not stated whether or not this was the case. Of course statistics that contain such mixed cases cannot fairly be compared with series of cases of uncomplicated diphtheria.

Again in every year a certain number of patients did not receive antitoxin. These individuals, it is stated, came under two classes: (1) Very mild cases, and (2) moribund cases. In most lists the latter are rightly excluded, and of course the question as to whether very mild cases should receive the remedy or not is one to be decided by the authorities in charge; but if they were included the death rate would of course be somewhat lower, and lists from which these favorable cases are excluded cannot be used with fairness in determining the value of the antitoxin treatment.

CORRESPONDENCE.

THE MARTYRDOM OF DR. LOUIS KNAPP'S FAMILY.

NEW YORK.

SIR:—The following notice appeared in the New York *Sun* August 21st:

QUITS WORLD TO NURSE LEPER.

St. Louis Doctor Leaves Wife and Children in Interest of Science.

ST. LOUIS, Mo., August 20.—Dr. Louis Knapp of this city has volunteered to nurse the Chinese leper Dong Gong and entered on his duties this morning at the old City Hall building. Later a cottage is to be built at the quarantine station for the physician and his patient, where they will be isolated from the world until death comes to their release.

Unlike Father Damien, Dr. Knapp goes solely in the interest of science, that he may study the disease, and, if possible, discover a remedy therefor. In taking this step Dr. Knapp widows his wife and orphans his four children, for to them he must be as one dead. The final farewells between the doctor and his family were said this morning before he went to the offices of the Health Department to report for duty.

Not only will Dr. Knapp have to be physician and nurse to his patient, but cook as well. He enters upon his dreary life firm in the belief that he will be able to resist the contagion and may discover some method of treating the disease which will be beneficial to humanity in general.

The doctor is 40 years of age, graduate of a Detroit medical college, and lived with his family at 4662 Virginia Avenue. He said: "Any disease is incurable until its cure is discovered. If a cure for leprosy is ever found it will be found by some one who has devoted years to study of an acute case of the disease, and I am not without hope that I may at least contribute to such a discovery."

The health officers say that the disease will not reach its zenith under five years and the patient may live ten years or

more, but death is the inevitable outcome. During all this time Dr. Knapp will have sole charge and care of Dong Gong, unless he too should be stricken.

Allow me to ask why there should be all this Damien heroics in Missouri over the care of a Missouri leper? Are not the health authorities of that progressive State aware that there is absolutely no more danger to the doctor's family in the care of a leper than there is in his care of any other contagious disease? There is not as much danger to him and his children in the care of lepers as there is in the care of the tuberculous and diphtheritic. By taking the most ordinary precautions he will not contract leprosy, the same as are taken by every surgeon in the operating wards of our hospitals, whose hands must come in direct contact with diseased tissues. It is the neglect of such precautions by the common people that spreads leprosy. Direct contact with a leper can be avoided; and also objects that have been handled by him need not be handled by the doctor or nurse. Insects will spread leprosy, it is true, if they once become infected, but until they are infected they will not unless the doctor puts the wound which the insect has made in direct contact with leprous discharges. Dry air will destroy the leper bacillus before he gets beneath the skin. Hot air baths are curative; moist baths are not. Hence the efficacy of dry climate in preventing the spread of leprosy. It has been assumed that no nomads ever contract leprosy because of their outdoor life. Nomads are not prone to leprosy simply because they live in a *desert* or dry air. *Firing* lepers is a very old treatment of leprosy in China—a much better means of cure than all the moist treatment ever invented. The fire worshippers gave to the Chinese and Japanese their only successful cure—hot acupuncture needles. Galvano-cauterization, therefore, is a sure cure *in the beginning* of leprosy, when all the bacilli can be reached.

Dr. Knapp of St. Louis is overcautious in ostracizing himself from his wife and four little ones, and he is worse when he limits them to an allowance of $50 a month as support for "perhaps five or ten years." Moreover he will not be able to do in so short a time what has resisted the intelligence of the world since 4,000 years before Christ's time. Read the leprosy sphinx.

It is my opinion that the disease will be incurable even after Dr. Knapp has had his experience with it.

Until mankind shall be lifted up to higher planes of natural resistance to this father of all the bacillaric enemies of human tissue by an improved civilization much better than even our boasted Christian civilization, leprosy will continue to scourge the lower strata of human society. Our only racial safeguard is in universal isolation (segregation) and medical supervision of *all* contact with lepers.

The tubercle bacillus is believed by many of the world's best leprologists to be identical with the leper bacillis. Do Dr. Von Ruck of the Asheville Consumptives' Home in North Carolina, or Dr. Trudeau of Saranac, Adirondacks, deem it necessary to separate themselves from the bosoms of their families in the performance of their duties to consumptive patients? By no means. Yet there are the same dangers; nor do leper specialists anywhere in the world in the worst scourged leper countries. Even Dr. Beaven Rake of Trinidad Leper Asylum lived with his family and two boys while he was doing probably more pathological work in the dead house and laboratory of his leper asylum than has been done since in the whole world, excepting Pleistiftelsen for Spedalske No. 1 at Bergen, Norway, where Danielsen and Hansen did their work. Yet Dr. Rake felt no alarm for his loved ones. Danielsen even inoculated himself without effect. There has not been a doctor in Norway since 1856, where the isolation of lepers was begun, nor a nurse of lepers who contracted the disease at the hospital. And yet they handled 3,000 lepers. You see therefore that it is perfectly safe for Dr. Knapp of St. Louis to return every day to his family if he wishes to. A physician's first duty is to his family, and the *Dong Gong* of science should come afterwards. The family of a leper specialist's family cannot be in question until he himself has become infected. And he will know it soon enough to protect them.

Thus Dr. Knapp may accomplish just as much of value to science as with all that shining halo about an ordinary performance of duty. Dr. Morrow has treated forty or fifty lepers, Dr. Piffard say thirty, Dr. Fox at least twenty right here in New York, without blowing loud blasts on their professional trumpets. I myself have had on my hands at one time six lepers. None of us medical men have contaminated our families, for we took the proper means to prevent it, just as Beavan Rake did, as Danielsen, as Hansen, and everybody else who has to do with lepers does. We do not even pretend that we walked into a lion's den!

As long as medical men are found to lend themselves to such newspaper sensation, the National Leper Home will be received by no state. Suppose Congress should at its next session propose that the nation's home for lepers should be put in St. Louis, the center of the Union, would your people with Dr. Knapp's example, backed by the State Board of Health authority before them, allow the buildings to stand? Would they not do, as the excited populace did in Jefferson Parish, Louisiana, burn the structure to the ground? Louisiana, with all her experience with leprosy since 1765, and with 400 lepers loose, roaming about the land, would not accept her own legislative enactment to care for her own lepers. Would any state be willing then to receive the lepers from other states? Even in Pennsylvania my application for a permit for a private National Home was shelved by Dr. Benjamin Lee, the secretary of the State Board of Health. I had proposed to open such an institution in Montgomery County, across the Philadelphia line, in case Congress refused to pass a national leper law. Nowhere else than in Yellowstone Park can a leper home be safely placed, for in any state the public will object. To put the home on an island off our coast would be cruel to the lepers, for there their disease would rapidly progress. A dry climate must be found, and far inland, away from sea coasts. However, Rome was not built in a day, and between now and the next meeting of Congress is too short a time to mould public opinion on the matter. I write you merely for the purpose of taking an exception to Dr. Knapp's assumption of a false position on this question; not that it matters so much, but then he is a medical man. ALBERT S. ASHMEAD, M.D.

SUBSTITUTION-LAW PASSED IN TENNESSEE.

BATTLE & CO., CHEMISTS' CORPORATION,
ST. LOUIS, Aug. 27, 1901.

Editor ST. LOUIS MEDICAL AND SURGICAL JOURNAL:

I enclose you a copy of an act passed by the Tennessee legislature. It is now the law in that state. This is a stroke in the right direction, as most of the substitutions are done in prescriptions. We are assured that Dr. Deering J. Roberts wrote the act and through the influence of his friends had it passed. We submit the matter to you to act as you think proper. My own opinion is that the remedy for substitution lies in the hands of

the physician himself. The *Medical Record*, August 24th, in an editorial says: "* * Generally speaking the physician is the one to suffer the most, as his disappointed client is apt to leave him for another. How many lost patients can be accounted for in this way it would be difficult to imagine. * * The man who substitutes once will do so again. He has no conscience to begin with, and nothing, in fact, to which an appeal can be made."

When the physician becomes as careful of his tools as the carpenter or cabinet maker there will not be much substitution. The doctors are careless, think their duty ends with writing the prescription; that is why so many physicians are street car conductors, motormen, etc. I have heard doctors say they would just as soon have the druggist make bromidia as use Battle & Co's., thus opening the door to general substitutions. What is necessary is for the doctor to take the trouble to see if his prescription is filled as written; if not, quit that druggist at once and for all. There are thousands of druggists who would no more think of substituting than of passing a counterfeit bill. Let the doctors patronize these. Just so long as the doctor will submit, just so long will substitution continue. Respectfully,

C. A. BATTLE, President.

AN IMPORTANT LAW—HOUSE BILL No. 320.

An Act to prevent the substitution of any drug in filling physicians' prescriptions by druggists in the State.

SECTION 1. Be it enacted by the General Assembly of the State of Tennessee, that it shall be unlawful for any corporation, firm or person, or any combination or association of corporations, firms or persons engaged in the business of buying, compounding and selling drugs and medicines, to substitute any drug or medicine in lieu, or instead of that given to the patient by the physician on the face of his prescription.

SEC. 2. Be it further enacted, that it shall be unlawful for any agent or employe of such person, firm or corporation or association or combination of persons, firms or corporations engaged in the business of buying and selling drugs in this state to substitute any medicine for specific medicine mentioned in the physician's prescription.

SEC. 3. Be it further enacted, that any person, firm or corporation violating the provisions of this act, or aiding or abetting the

violations of the same, shall be guilty of a misdemeanor, and upon conviction shall be fined not less than $25 nor more than $100 for each and every offense.

SEC. 4. Be it further enacted, that this act take effect from and after its passage, the public welfare requiring it.

Approved April 3, 1901.

BENTON MCMILLIN, Governor.
E. B. WILSON, Speaker House Representatives.
NEWTON H. WHITE, Speaker of the Senate.

A true copy, JOHN W. MORTON, Secretary of State.

Collective Investigation of the Influencc of the Silver Nitrate Injections on Phthisis.—

To the Members of the Medical Profession:—In 1892 the undersigned began a collective investigation of the action of cold in the treatment of acute pneumonia, and there is reason for believing that this procedure which resulted in gathering four hundred cases of this disease thus treated, with a death rate not quite five per cent., was an important factor in calling attention to the utility of that treatment, and in introducing it to the profession of this country. That research was based on the conviction that no remedy can be called truly successful until it has passed the exacting crucible of clinical experience; and it is now proposed to apply the same ordeal to the silver-injection treatment of phthisis, which in a large hospital, dispensary and private practice, reaching over a period of three years, and during which many thousand injections were administered, has given me greater satisfaction than any other method that I have ever employed. In keeping with the above expressed feeling a cordial invitation is herewith extended to those members of the profession who have the inclination and opportunity to investigate this method of treating phthisis, and to whom a reprint on the subject with full information and blanks to report cases will be cheerfully sent on application. THOMAS T. MAYS, M.D.,

1829 Spruce Street, Philadelphia, Pa.

August 15, 1901.

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A. H. OHMANN-DUMESNIL, A.M., M.D.,
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EDITORIAL DEPARTMENT.

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EDITORIAL.

THE CRIME OF SUBSTITUTION.

When we say the *crime* of substitution we speak advisedly. This nefarious practice seems to be gaining apace these latter days, and the unblushing effrontery of the substitutors is something that is really marvelous in its shamelessness. It was at first patent medicines that were imitated, and so much success attended these efforts that proprietary remedies have been made the targets of insidious attacks of the unprincipled scoundrels who will not only foist their poorly-made imitations on those who know no better, but have gone so far as to substitute cheap, worthless chemicals upon their deluded customers instead of giving them what a prescription really calls for and is demanded. The deluded victims are led astray by such catch-penny advertisements as "cut prices," etc. They believe that prices can be reduced to almost nothing from the prevalent idea that druggists make enormous profits. The honest druggist is entitled to a good living, and that is about as much as he can make out of a legitimate business.

Let us view the evil of substitution from the physician's standpoint. In order to make himself competent to treat disease he has spent time, money, and brain tissue. With an equal expenditure devoted to business his profits from a monetary point of view would be much larger, more especially after the same length of time devoted to business. Now after all this expenditure and constant study the physician writes prescriptions and is disappointed in the results he obtains. Not alone this, but his patients are apt to desert him and brand him as incompetent. He cannot understand this until some astute friend advises him to inquire as to what is used in the compounding of his prescriptions and by whom the mixtures are made. He goes to the shop of the druggist who has compounded some of his unsuccessful preparations, and he finds that what he prescribed is not kept in stock. Can anything be more criminal than maliciously garbling a physician's prescription? By what right does a druggist injure a man's reputation, spoil his practice, and make him a victim of his cupidity and lack of honor, honesty, and probity? It is time that physicians watch the medicines compounded by druggists and watch the druggists themselves. This is absolutely necessary as a measure of self-protection, and we are pleased to see that many are doing this now. In the case of proprietary remedies they exact that original packages be dispensed, and the same is demanded of many other remedies of certain brands but which are not proprietary. The physician should go further and explain to his patient what to expect, and instruct him to bring the medicine for examination in case the effects predicted by the physician are not observed.

From the patient's standpoint substitution is a crime of the worst sort, because if this practice does not produce actually dangerous results it prevents the good effects which would naturally be expected. The patient does not know that he has been gulled and he is quick to blame his physician for the evil which properly should be laid at the door of the druggist. The patient in his simplicity believes that the druggist fills a prescription as it is written, and naturally concludes that it has not been written right. It is this assumption of a superior knowledge on the druggist's part and the unjust criticism heaped upon a really competent physician which have led so many to dispense their own medicines, much as they disliked the practice. The patient

is in need of a great deal of education at the hands of the physician, and it is the duty of every physician to do this work, not only for his own protection but for that of his patient. The patient will quickly appreciate the advantage to himself, he will learn who the substituting druggists are and carefully avoid them. Patients must learn that in drugs as in everything else the best is the cheapest, and they cannot afford to run any risks for the sake of a few pennies. Those remedies which are good and reliable are often expensive, but what is this when weighed against the real benefits which are obtained and which substitutes can never procure?

Another point of view is that of the manufacturer of drugs and proprietary remedies. These gentlemen spend money, brains, energy and time to produce remedies of true worth upon which full reliance may be placed. They meet with success, and directly we see the cloven hoof of the substitutor. We are not surprised that many remedies have been denounced as worthless, when as a matter of fact it was the badly made substitutes that were. We have seen over three hundred bad imitations of a really meritorious remedy made by as many unscrupulous imitators and substitutors. It is only good articles that have imitators, and this is an imitation which, far from being sincere flattery, is a crime. So much so is it regarded by the laity that the legislature of Tennessee has recently passed an enactment making the substitution of drugs a crime. The complaints of manufacturers have of late been very bitter, and justly so. They have done much good to the medical profession, and *quid pro quo* is certainly nothing but just and fair. Their products have become the sheet anchors of a large majority of the medical profession, and there is no druggist who can extemporaneously compound one of these preparations which it takes weeks to prepare properly.

The question which naturally suggests itself is how to stop this nefarious practice of substitution. The manufacturers are active, but they cannot stop it single-handed. Every physician must lend a helping hand. He must see to it that his prescriptions are properly filled. He must note the druggists who substitute, and then his next move should be to report them to the members of his medical society as being unreliable; in one word, substitutors. The small individual who stoops to this infamous practice for a few cents would thus find himself blacklisted by physicians

and he would have small opportunity afforded him to pursue his criminal practice. Add to this the judicious warning of patients, prohibiting them, if necessary, from dealing with this gentry and we would soon have a radical cure made drastic, if necessary. Let every physician remember that self-preservation is the first law of nature, and, if for no other reason, he will certainly do his utmost to suppress substitution.

Conditions Existing Subsequent to Alleged Operation Admissible.—Facts and conditions existing subsequent to the alleged operation, but which tend to explain the patient's condition, are also relevant and may be shown upon trial. It was accordingly held proper to permit a witness to state that she had been sent for the day before deceased's death to wash her and change her clothes, and that she found blood stains upon the bed and clothing, and that there was a peculiar offensive odor which she had never noticed before at any time or place, although she had noticed something like it. And so, a witness was permitted to testify that about the middle of February (the operation being alleged to have been committed about the middle of January) she slept one night in the same bed with the complaining witness, who looked unusually pale and feeble, and sighed and groaned a good deal; that the witness made the bed next morning and saw red stains upon it, through the feather bed and upon the straw bed, which she thought were quite recent, and some of them more recent than others. And another witness in the same case was permitted to testify that she lived in the same house with complaining witness; that about January 20th complaining witness was confined to her bed and that witness was called to aid her, and found that she had fainted; that after she began to get well, witness found her washing stains from the tick of her feather bed, and noticed stains upon her straw bed. Regarding the admissibility of this evidence the court said: "The objection that the facts occurred or appearances were observed a month after the alleged abortion does not render the evidence incompetent, though it may affect its weight. That they were not connected with the abortion we can not presume. We can not know that the result of the injury did not continue thus long."—*New York Medical Journal.*

BOOK REVIEWS.

Transactions of the Medical Society of the State of New York for the Year 1901. 8vo., pp. 524. [Printed by the Society. 1901.

This is an unusually rich volume in the number and value of the papers it contains and the large number of illustrations which occur throughout its pages. The contents consist of the Anniversary Address, the Merritt H. Cash Prize Essay for 1901, and forty-six Communications. The Anniversary Address is on the Radical Cure of Inguinal Hernia, by Dr. A. M. Phelps. This is indeed a masterly production on the subject, rendered doubly interesting by the numerous original illustrations used by the author. The Merritt H. Cash Prize Essay, by Dr. Lucien Howe, is on the Measurements of the Interocular Base Line and the Size of the Metre Angle. This is destined to prove a most valuable essay for ophthalmologists. The communications open with the following five papers by non-members of the Society: The Rôle of Injections in Diseases of Women, by Dr. Chas. A. L. Reed; Gastrojejunostomy in Gastrectosis, by Dr. A. H. Cordier; Inguinal Hernia, by Dr. B. Merrill Ricketts; The Toxin of the Colon Bacillus, by Dr. Victor C. Vaughan; and the Surgery of the Spleen, by Dr. J. Collins Warren.

It would be a rather difficult matter to even catalogue the superior papers in this volume, and so but a few are taken at random as an indication of the general tone which pervades them. The Early Diagnosis of Insanity, by Dr. Carlos F. MacDonald, is a careful consideration of this important subject. A practical article, and one which will prove useful to the general practitioner, is that by Dr. J. H. Fordyce, entitled What is Rodent Ulcer? There seems to exist yet some confusion on this subject, which has been so thoroughly elucidated by dermatologists. Dr. Charles Edmond Davis contributes a very interesting illustrated paper on Leprosy in the Hawaiian Islands. The subject of lepra is becoming daily more interesting on account of the efforts being made to establish national leper settlements where lepers may be isolated. Deep Breathing as a Curative and Preventive Measure, by Dr. John H. Pryor, contains much that will be found valuable from a therapeutic standpoint. A valuable therapeutic article is that by Dr. Reynold W. Wilcox on Belladonna vs. Scopolia. Expectant Treatment, by Dr. A. Jacobi, is a well-considered paper in which the author shows that "nature" does not do everything. His concluding sentence is full of sound sense: "We should not try to treat the name of an illness, but the patient."

The existence of the So-Called Traumatic Neurosis is denied by Dr. Harold N. Moyer, and very justly so, as he proceeds to show in the paper he contributes. Dr. L. Duncan Bulkley has added another chapter to the etiology of skin diseases in his paper on the Relation Between Certain Diseases of the Skin and the Menstrual Function. Whilst not unknown, he presents the matter in a very clear and concise manner. The Relations of Appendicitis to Diseases of the Uterine Appendages, by Dr. A. L. Beahan, will be found of more than ordinary interest to surgeons and gynecologists. A more than ordinarily interesting paper is that by Dr. Daniel W. Marston on Congenital Dislocation of the Shoulder, with Report of Two Cases Dislocated Posteriorly. This paper is well illustrated and very demonstrative of the condition whereof the author speaks. The concluding paper of these Transactions is by Dr. Carl Beck, and it is a very excellent one on a subject but little considered in works on surgery. It is on Tenonitis and Tenonthecitis Prolifera Calcarea. We are certain that it will attract the attention of all surgeons as well as pathologists.

In conclusion, we cannot but reiterate our admiration for this volume, and no one deserves more credit for its construction than the efficient secretary of the Medical Society of the State of New York—Dr. Fred. C. Curtis of Albany. He has always produced handsome volumes of Transactions with the help of Dornan, the Philadelphia printer. We hope that Dr. Curtis will be spared for many years to continue his good work in the field of society medical literature.

The Ready Reference Hand-Book on Diseases of the Skin. By GEORGE THOMAS JACKSON, M.D. (Col.) 12mo., pp. 642. With 80 Illustrations and 3 Plates. Fourth Edition, thoroughly Revised. [New York and Philadelphia: Lea Brothers & Co. 1901. Price, $2.75 net.

We are not surprised that a fourth edition of this sterling little work has been called for by the medical reading public. It is so constructed as to contain all the essentials, and they are given in clear language and set forth in such an interesting manner that it is not only students and general practitioners who will read it, but specialists will find it a convenient little book for ready reference. Following in good part the modern custom of many writers on dermatology, the author has adopted the alphabetical plan in dealing with the various diseases. This, however, has not been at the sacrifice of a due consideration of general principles, which occupies the first part of the book.

Beginning with General Considerations, which include the anatomy and physiology of the skin, diagnosis is well considered at some length, and then therapeutic notes of a general character are given. The classification of skin diseases which is adopted is

E. B. Bronson's modification of that of Anspitz and is that given by Crocker. Of course, each one will find some fault with it, as no classification of skin diseases has yet been made which is satisfactory to all dermatologists. This part of the book closes with Some Dermatological Don'ts, which the author published the latter part of 1888, and which are still good and useful.

We are very favorably impressed with this edition of Dr. Jackson's book, but rather disappointed in the fact that he fails to give many American authors credit for things which are attributed to foreigners, who came forward some time later. The bibliography given is good as far as it goes, but it is defective in a good many respects, and due credit is often not given or no credit at all where it is certainly deserved.

We do not desire to appear captious, but we certainly desire to see such a good book approach more nearly to the ideal. It is certainly deserving of the unqualified support of the medical profession, as it is well written, thoroughly up to date, and complete despite its small size. We expect to see a new edition appear soon, as its general excellence will create a large demand for this one. O-D.

La Peste Bubonique dans La République Argentine et au Paraguay. Epidémies de 1899-1900. Rapport présenté au Departement National d'Hygiéne par les Docteurs Louis Agote et A. J. Médina. 4to., pp. 229. Illustré. [Buenos Aires: Felix Lajouane. 1901.

The book before us is an excellently written report to the National Department of Health on the bubonic plague in the Argentine Republic and in Paraguay. The authors begin their report with an account of the disease, and then follow this with its geographic distribution over the world and then more particularly in the countries of which they speak. In this part are given a number of carefully prepared maps of countries; and, when speaking more particularly of the Argentine Republic and Paraguay, the plans of cities are given and the locations of the different cases carefully noted. In addition to this the sanitary conditions and improvements which have been made are indicated, so that from a demographic point of view the report is of the highest value. This should prove especially interesting to sanitarians. Now that the bubonic plague has become more or less disseminated in Europe and noted in this country, this report possesses more than ordinary value, and it would make this value more felt were it translated in English.

In Chapter I. the question of the importation of the plague into America is considered, and the progress of the epidemic is further noted. Chapter II. is devoted to a consideration of the importation of the plague in Rosario da Santa Fé; and Chapter III. to the progress of the plague in Rosario. Chapter IV.

considers the plague in Buenos Aires. In Chapter V. is considered the epidemic center of the bubonic plague and the hygienic conditions of Buenos Aires, Asumcion, and Rosario. Chapter VI. is one rich in clinical observations, being devoted to the symptomatology of the disease. Many illustrations of patients are given in addition to careful descriptions and clinical histories of cases. This is a most valuable part of the report, and whilst it embraces but 54 pages they are replete with most interesting matter which will find its way into current medical literature as well as works written in the future. We are most favorably impressed by this part.

No less interesting is Chapter VII., which deals with the treatment both by serotherapy and by vaccination. This specific treatment does not yield the most brilliant results if we are to judge from the tables which are given, and the authors state that they have obtained as good results from symptomatic treatment, cardiac stimulants, balneotherapy according to Brandt's method, and occasional phlebotomy. In the next chapter is given a long dissertation on the prophylaxis of this formidable affection. The most important prophylactic measures which are advised are quarantine and cleaning cities as thoroughly as possible. The isolation of infected cases and the prevention of migration by any but perfectly healthy individuals are recommended. To ensure the latter the most rigid medical examinations are recommended.

The book concludes with an appendix, which contains the clinical histories and autopsies of a very large number of cases. In every one confirmatory proof of the disease was afforded by bacteriological examination and positive cultures of the specific bacterium of the plague.

As we stated above, the report is one which is thorough and well-written, and it is destined to become a classic on the subject with which it deals. The authors are certainly deserving of the highest praise for the most excellent work they have done, and are certainly an honor to the profession of the Argentine Republic.

Practical First Principles. Simplifying the Study of Normal and Abnormal Structure and Function, and aiding Diagnosis. Designed for the Use of Students and Practitioners of Medicine. By A. H. P. LEUF, M.D. 8vo., pp. 105. [Philadelphia: *The Medical Council.* 1901. Price, $1.00 net.

The author has attempted in the book before us to simplify the study of medicine by supplying the connecting links between the different departments, and thus do much to abolish the want of connection apparent in the detached mode of instruction now in vogue. Beginning with protoplasm and the cell he proceeds to the consideration of organs, tissues, systems, the body as a

whole, cell nutrition, cell physiology, cell pathology, general principles, nomenclature, and an appendix explaining the microscope. We are rather surprised that a book aiming at so much comprehensiveness should omit any mention of karyokinosis, mitosis, or indirect cell division, so ably set forth by Flemming some years ago.

The book before us is very elementary in character, and will doubtless prove of some value to students in bridging over some of the difficulties they meet in their studies. One good point we find in it is that it deals with facts and does not lead the reader astray in a sea of speculation.

LITERARY NOTES.

Books Received.—The following books have been received during the past month, and are reviewed in the present number of the JOURNAL:

The Ready Reference Hand-Book on Diseases of the Skin. By George Thomas Jackson, M.D. (Col.) 12mo., pp. 642. With 80 Illustrations and 3 Plates. Fourth Edition, thoroughly Revised. [New York and Philadelphia: Lea Brothers & Co. 1901. Price, $2.75 net.

La Peste Bubonique dans la République Argentine et au Paraguay. Epidémies de 1899-1900. Rapport présenté au Département National d'Hygiéne par les Docteurs Louis Agote et A. J. Medina. 4o, pp. 299. Illustré [Buenos Aires: Félix Lajouane. 1901.

Transactions of the Medical Society of the State of New York for the year 1901. 8vo., pp. 524. [Published by the Society. 1901.

Practical First Principles. Simplifying the Study of Normal and Abnormal Structure and Function, and Aiding Diagnosis. Designed for the Use of Students and Practitioners of Medicine. By A. H. P. Leuf, M.D. 8vo., pp. 105. [Philadelphia: *The Medical Council.* 1901. Price, $1.00 net.

The Journal of Orificial Surgery has gone the way of all earthly things. It existed nine years, and during all this period it made desperate attempts to create a place for itself. Its founder, owner, and editor, Dr. Pratt, could not make enough converts to his style of homeopathy to secure a paying constituency for his organ; so it quietly gave up the ghost with its last June issue. We are sorry that it is no more, for it was a very amusing publication.

MELANGE.

A New Law Regarding Wet Nurses in Paris.—The Prefect of Police in Paris recently issued an order that wet nurses must not leave their own infants to be bottle fed, but must see to it that they, too, are wholly or in great part nourished at the breast. This has caused a great scarcity of wet nurses, and the Parisian mothers are in despair at having to choose between suckling their own offspring and bringing them up on the bottle.—*Exchange.*

The Duchess and the Bone-setter.—At a recent garden-party entertainment for the benefit of crippled children in London, the Duchess of Sutherland paraded the grounds with "an eminent bone-setter," who is said to have attended Her Grace on various occasions. Current professional comment was that if the Duchess chose to trust her limbs to a quack she could do so; but if, as was generally believed, she wished to place the crippled children under his care she should be plainly told to confine the results of her folly to her own. The curious inconsistency of the British medical law is shown in the fact that this ignorant man is permitted to practice surgery without molestation.—*Medical Record.*

The American Pharmaceutical Association will open its 49th annual meeting at the Southern Hotel, St. Louis, September 16 to 21, and continue its sessions daily throughout the entire week.

This is a representative organization having members in South and Central America, Mexico, Canada, and the new possessions.

The convention will be devoted to scientific, educational and legislative pharmaceutical affairs. The last meeting in this city occurred in 1871. Preparations are being made for extending a hearty welcome to the visitors, and an elaborate program of entertainment will occupy the time intervening between the association sessions.

Many physicians belong to the association, and the local fraternity is invited to attend the sessions. Copies of the program

and other information can be obtained by addressing the local secretary, Dr. H. M. Whelpley, 222 South Broadway, St. Louis.

"The Country Doctor"—A Notable Picture.—One of the most important and admired pictures displayed in recent years at the National Academy exhibitions is the "The Country Doctor," by Mr. W. Granville Smith.

The artistic merits of this notable picture are certified by its place of honor in the chief American art exhibition; its power of appeal to human sentiment was evidenced by the persistent attention it attracted, touched by its reality, its home humanity, its suggestion of pathos.

"The Country Doctor" is a vivid portrayal of a familiar episode—a furious winter night tempest, a long struggle through drift and storm at duty's call, an exhausted old doctor struggling

wearily forward, a fatigued horse shrinking in the blinding snowblasts, an anxious mother eagerly waiting the longed-for relief. From the porch of her humble country home she peers eagerly out into the storm. The lantern she holds above her head cuts a feeble path of light through the gloom, along which the doctor plows his way to shelter.

The original painting is 4 feet by 6 feet, and was purchased by The Arlington Chemical Company of Yonkers, N. Y., for the sum of $1,000.

The artist, through the courtesy of the owners of the original painting, has just issued a special art reproduction of his paint-

ing, 16½ by 24 inches, which is an absolute *fac-simile* of the original in drawing, color and tonal spirit, on the finest of heavy plate paper, 22½x30 inches, mounted with gold mat and inclosed in substantial box.

The edition is limited to 250 copies, and is sold, subject to examination and approval, at $8.00 each. He sends photograph on application.

Those who desire a copy should not delay in addressing the artist, Mr. W. Granville-Smith, at 52 East Twenty-third Street, New York, as the edition is likely to be soon exhausted.

Tri-State Medical Society of Alabama, Georgia and Tennessee.—The officers are: Dr. M. C. McGannon, president, Nashville, Tenn.; Dr. W. G. Bogart, vice-president, Chattanooga, Tenn.; Dr. Seale Harris, vice-president, Union Springs, Ala.; Dr. Michael Hoke, vice-president, Atlanta, Ga.; Dr. Frank Trester Smith, secretary, Chattanooga, Tenn.; Dr. Geo. R. West, treasurer, Chattanooga, Tenn.; and the chairmen of committees are the following: Dr. S. S. Crockett, arrangements, Nashville, Tenn.; Dr. R. R. Kime, sociology, Atlanta, Ga.; Dr. J. B. Cowan, credentials, Tullahoma, Tenn.; Dr. John P. Stewart, auditing, Attalia, Ala.

The thirteenth annual meeting will be held at the Tulane, Nashville, Tenn., Tuesday, Wednesday and Thursday, October 8, 9, 10, 1901.

The following is a partial list of the papers promised for this meeting:

President's Address.—M. C. McGannon, Nashville, Tenn.

1. "Some Points in the Diagnosis and Treatment of Heart Disease."—J. B. Marvin, Louisville, Ky.
2. "Tuberculosis."—Y. L. Abernathy, Hill City, Tenn.
3. "Malaria as a Cause of Puerperal Eclampsia."—E. O. Williamson, Gurley, Ala.
4. "Static Electricity."—J. B. Goodwin, Kingston, Tenn.
5. "Smallpox."—Wm. A. Duncan, Chattanooga, Tenn.
6. "Remarks on Some Recent Cases."—A. B. Ramsey, McMinnville, Tenn.
7. "Anesthesia in General Practice."—J. B. Murfree, Murfreesboro, Tenn.
8. "Anesthesia."—German Haymore, Chattanooga, Tenn.
9. "Local Anesthesia."—C. Holtzclaw, Chattanooga, Tenn.

10. "Local Anesthetics as Applied to Mucous Membranes."—B. F. Travis, Chattanooga, Tenn.

11. "Studies of the Blood and Urine in Connection with Anesthesia."—H. Berlin, Chattanooga, Tenn.

12. "Autoinfection."—A. W. Boyd, Chattanooga, Tenn.

13. "Report of Committee on Sociology."—R. R. Kime, Chairman.

14. *a.* "Hereditary and Acquired Characteristics as a Social Question."—R. R. Kime, Atlanta, Ga.

15. *b.* "Legislation and Its Limitation in Prevention of Crime and Disease."—Hon. John Bell Keeble, Nashville, Tenn.

16. *c.* "Marriage and Heredity in Relation to Insanity."—T. O. Powell, Milledgeville, Ga.

17. *d.* "Suppression of Consumption."—R. C. Bangston, Birmingham, Ala.

18. *e.* "Tuberculosis, Its Prevalence and Prevention."—J. D. Cromer, Atlanta, Ga.

19. *f.* Syphilis and Its Prevention as a Social Question."—Childs & Champion, Atlanta, Ga.

20. *g.* "Syphilis and Its Relation to Eye Disease."—A. W. Sterling, Atlanta, Ga.

21. *h.* "The Prevalence of Gonorrhea in the Male as a Social Question."—W. Frank Glenn, Nashville, Tenn.

22. *i.* "Gonorrhea in the Female with Suggestions as to Means of Prevention."—W. G. Bogart, Chattanooga, Tenn.

23. *j.* "The Development and Control of the Sexual Instinct."—J. W. Maquillan, Chattanooga, Tenn.

24. "Softening of the Brain."—Michael Compbell, Knoxville, Tenn.

25. "Migraine."—Curran Pope, Louisville, Ky.

26. "Diagnosis and Treatment of Typhoid Fever."—J. C. LeGrand, Birmingham, Ala.

27. "A Plea for the Better Teaching of Physical Diagnosis in Southern Colleges."—Hazle Padgett, Columbia.

28. "Acute Dysentery; Some Experiences with Report of Cases."—Allen E. Cox, Milan, Tenn.

29. "Limitation in Abdominal Surgery."—T. J. Crofford, Memphis, Tenn.

30. "Conservative Treatment in Appendicitis."—W. E. Fitch, Savannah, Ga.

31. "Trachoma of the Female Genital Tract; A Plea for Its Early Recognition."—J. A. Hale, Alto Pass, Ill.

32. "Flat Foot."—Michael Hoke, Atlanta, Ga.

33. "Anatomy of the Genito-Urinary Organs with Specimen."—J. S. B. Wolford, Chattanooga, Tenn.

34. "Malignant Disease of the Liver."—Geo. R. West, Chattanooga, Tenn.

35. "Gonorrhea."—J. W. Johnson, Chattanooga, Tenn.

36. "Disease of the Sigmoid Flexure."—W. L. Nolan, Chattanooga, Tenn.

37. "Infant Feeding."—C. S. Durand, Chattanooga, Tenn.

38. "Scarlantina and Complications."—H. B. Wilson, St. Elmo, Tenn.

39. "Brain Surgery; Report of Cases."—Edwin B. Anderson, Chattanooga, Tenn.

40. "Rheumatism; Cause or Effect in Affections of the Throat."—W. Cheatham, Louisville, Ky.

41. "The Work of the Laryngologist in Its Relation to that of the General Practitioner."—Richmond, McKinney Memphis, Tenn.

42. "Superficial Foreign Bodies in the Eye."—A. C. Corr, East St. Louis, Ill.

43. "The Future of the Negro from the Standpoint of the Southern Physician."—Seale Harris, Union Springs, Ala.

44. Title to be announced.—W. D. Gaines, Lafayette, Ala.

45. Title to be announced.—W. R. Blue, Louisville, Ky.

46. "The Sanitation of Havana."—Chas. M. Blackford, Washington, D. C.

47. Title to be announced.—Joseph Price, Philadelphia, Pa.

48. "Night Sweats or Phthsis."—L. P. Barbour, Bowlder, Colo.

49. "Gonorrhea in Relation to Diseases of the Eyes."—C. E. Peete, Macon, Ga.

50. "A Case of Chorea."—F. B. Sloan, Cowan, Tenn.

51. "Pain and Its Pathology."—J. E. Clark, Chattanooga.

52. "Traumatic Injury of the Eye."—J. T. Herron, Jackson, Tenn.

53. "Spinal Cocainization."—R. E. Fort, Nashville, Tenn.

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VOLUME LXXXI.——NOVEMBER, 1901.——No. 5.

ORIGINAL COMMUNICATIONS.

THE "THIRD FACTOR" IN THE PROPAGATION OF LEPROSY: IS IT FISH?

BY ALBERT S. ASHMEAD, M.D., NEW YORK.

Dr. F. Ashburton Thompson's (Chief Medical Officer) report on leprosy in New South Wales for 1901 is at hand. He traces the case of one J. F. D., a leper, as follows:

"At Shoelhaven, 1871, W. Y. T. (ill) was associated with P. S. (well). To Richmond Revis, 1871, died (leprosy) 1887. H. R., native of same district, attacked 1888, admitted to Lazaret 1890, a neighbor and acquaintance of P. S. J. F. D., attacked 1899, admitted to Lazaret 1900; a first cousin once removed of P. S.; was 14 when P. S. died."

And Dr. Thompson thus comments upon it:

"This is a favorable opportunity for remarking that I have never denied the communicability of lepra from the sick, as seems to be supposed, but have merely pointed out the entire absence of direct proof of it, the extremely doubtful significance of much commonly accepted for circumstantial proof, and certain circumstantial records which apparently weigh heavily against it; among which last I will refer here only to the remarkable contrast between the behavior of lepra in New South Wales and in Victoria, as being one well known to me (Transactions of the Lepra Conference, Berlin, 1897). (See note.) And therefore, while all pathological analogies suggest that lepra probably is

communicable from the sick, and while the theory of maintenance of lepra by indirect communication from the sick *plus* natural resistance, which was based by the Lepra Commission in India on those analogies, is the best to account for the erratic incidence of the disease which can be based thereon, it has even seemed to me that at the least a third factor is needed to reinforce those two—in other words, that this theory does not coördinate all the observed phenomena.

"In the total absence of direct proof of communicability from the sick, it occurred to me that a very careful investigation of the circumstances surrounding the succession of cases among a white and civilized population in the rural districts, and a steadily continued succession of fresh cases in very small number, all the resources of an elaborate and highly efficient system of government could be brought to assist it. Investigation on these lines and with those advantages has now been carried on for ten years; and if it should be judged that the group of cases resultant therefrom, of which some particulars are given above, furnishes some ground for hope that after a further and much longer term a clue to the etiology of leprosy may be deduced from the record of epidemiology in this State, then the tedium, labor and physical fatigue entailed by the lengthening quest may be hopefully disregarded. In the meantime, whether the records point towards or from the maintenance of lepra by direct or indirect communication with lepers is indifferent to all those who are searching only for the fact."

The point referred to by Dr. Thompson, as to the behavior of lepra in New South Wales as compared with that of Victoria, is here given from his article, "On the History and Prevalence of Lepra in Australia" (Transactions Berlin Lepra Conference, 1897. Vol. I., page 169): "It is clear beyond doubt that there were many foreign lepers in Victoria from 1858 onwards, and uncontrolled, but no native white leper was ever recorded or detected, etc. On the other hand it is equally clear that from about the same time there were a good many white lepers in New South Wales long before any important number of cases among Chinese or other immigrants had been observed. And more than this, the disease died down—almost died out—in Victoria before notification became compulsory. So that, on the whole, it may well be said that if lepra can be diffused by lepers, then it seems as

though there were something about Victoria which prevented the imported infection from 'taking' there. Thus the most that can be suggested by way of adverse comment on these statements is that cases probably did occur among Chinese, etc., in New South Wales during the long series of years before 1883, although they were not observed, recognized or noted; the fact appearing in any case to be that the infection did take in New South Wales, but refused to take in Victoria, on the white inhabitants.

"The following facts were established there:

"I. Although lepers were imported to Victoria steadily during a long term of years and in considerable number, and althugh they always remained entirely unrestricted in their movements among the whites, no Victorian native white who had never left the colony has ever been attacked. Moreover the disease died away in Victoria quite independently of restrictive measures against the liberty of lepers, which in fact were first taken only in March, 1893.

"II. Although colored aliens of many different races, all of which have furnished cases of leprosy in Australia, have been imported during many years and in large numbers to all the better populated part of the country, which extends along the coast line from about the 146th degree of east longitude, easterly, and then northerly toward Cape York (Victoria, New South Wales, Queensland); and although native whites who had never left their colony have been attacked at various places in New South Wales and Queensland, there is no evidence and no good reason for surmising that any such native white has been attacked who lived south of the 35th parallel of south latitude (part of New South Wales and Victoria)."

Allow me to observe, regarding this very interesting question of "third factor" which Dr. Thompson raises, that some years ago I tried to cultivate the lepra-bacillus in living fish, in the hope of establishing some relation between living-fish diet of the Japanese and leprosy. Eels of all sorts are a conspicuous element of that diet in leper countries; and I learned that there was some connection between the Pacific Ocean blue hag fish (polistotrema). I attempted to obtain a specimen of the last just at that time for the purpose of inoculation experiments, but failed. I also wrote to Prof. C. O. White, director of the Marine Biological Laboratory, Wood's Hall, Mass., requesting some help in an

experiment I was making regarding the inoculation of living gold fish (Japanese) with the lepra-bacillus. My object was to determine, if possible, an intermediary host function between the living fish diet of the Japanese and leprosy. Prof. Whitney informed me that Dr. Morgan of Bryn Mawr, Pa., had told him there was a physician in Jamaica (West India) who held in this respect the same views. Having written to Dr. Morgan, I learned that he got his information from Dr. Brooks of Johns-Hopkins University, and did not remember the name of the man. I was told at the same time that there was little hope to get Dr. Brooks to answer letters. Dr. Morgan suggested I might apply to the physician in charge of the leper asylum, Spanish Town, without giving me the name of the doctor. From these sources there came really nothing of value.

I then wrote to Dr. Golo of the Tskidji Lepra Asylum, Tokio, Japan, he who was sent by the Japanese Government to Hawaii at the request of Kery Kalakaua, as follows:

"Mr. Arvoke, my friend, who is going to return to Japan, will bring you this letter, in which I take the liberty of asking for an important favor. I am making some experiments which are to establish an intermediary host relation between leprosy and living fish, if such a relation exists. Up to this time and so far as my experiments have reached, I had used the virus here procurable; but it is just possible that the virus procured on the very soil of Japan would suit my purpose more accurately," etc.

As I did not receive the specimen containing the Japanese lepra-bacilli, I could not continue the experimentation as I wished. Thus the matter remained in abeyance until last summer, when Prof. Jordan, the chief of the United States fish expedition to Hawaii, promised to carry on the investigation for me if it should be within his power. I know that it was brought to the attention of Prof. Evermann, the ichthyologist of the commission, and my brother of the United States Museum, who was entomologist to the expedition, wrote me from Honolulu that some of the matter would be published in the *Honolulu Gazette*. Of course I do not yet know what measures, if any, were taken to investigate this question.

It is my opinion that there is a connection between the fish of a leper country and the rapid or continued spread of the disease in the face of enforced isolation of lepers. There must be some

"third factor," as Dr. Thompson of Sydney intimates, to explain the many queer things about its propagation; for instance, here in the United States. Why it spreads in Louisiana, at the Mississippi's mouth, and not in Minnesota and Wisconsin, far from the coast. What influences the cod fisheries of Nova Scotia may have on the endemicity of the disease about the mouth of the St. Lawrence River. Why the coast cases of Norway are the tubercular type and those of the interior are the mild maculo-anesthetic. Why the fish-eating Indians of Venezuela are leprous and the others not. And a host of other relationships which I might mention here. These have caused it to be generally surmised by many leprologists that there really exists some mysterious factorship between fish and the disease in question. It occurs to me, therefore, that something ought to be gained if it could be shown that the lepra-bacillus can be cultivated (in Hawaii or other leper country) on fish. The conclusions to be drawn from the success or failure of this first experimentation would perhaps not be of very great importance until it could be shown that the fish could transmit the bacillus again to man, but they certainly would not be without interest.

The Medical Examination of Japanese at Honolulu.—In reply to Japan's remonstrance against the treatment accorded Japanese by the medical inspectors at Hawaii, this country is reported to have promised to investigate the matter and to adopt suitable measures to prevent a recurrence of the complaint.

Opposition to the Cigarette in Scotland.—A petition, signed by two hundred physicians of Edinburgh and Leith, has been sent to Parliament praying for the enactment of a law forbidding the sale of tobacco to children under sixteen years of age. The document is directed mainly against the use of cigarettes by boys.

A Just Fate.—A feminine faith-cure devotee of Urbana, Ohio, is reported to have run against the hard facts of nature. She attempted to cure four cases of smallpox occurring in one family, and not only failed in that, but contracted the disease herself. She then sent for a physician and "took her medicine" in great humility.—*Cleveland Journal of Medicine.*

THE ISOLATION OF LEPERS IS A NECESSITY.

BY A. H. OHMANN-DUMESNIL, ST. LOUIS.

Some time in the month of August last Dong Gong, a Chinaman, applied for treatment at the St. Louis Polyclinic. He was solicitous about his complexion and desired to have certain facial blemishes removed. Upon careful examination the suspicions of the attending physician were aroused, and he referred the patient to the City Dispensary, where a number of dermatologists were called for an opinion. They were all unanimous in declaring the case one of maculo-anesthetic leprosy. The patient, a Canton Chinaman, appeared fairly well nourished, and did not seem to appreciate the condition. He felt rather flattered at attracting so much attention. Dr. Engman's assistant examined the secretion from the nose, and claimed to have found lepra bacilli in it. This, of course, would be conclusive. To obtain a definite history would seem to be an impossible matter, as no positive answers can be obtained to leading questions. The writer saw the patient two weeks after the first inspection, and he was rapidly getting worse. He had been confined in a large room in the isolation portion of the dispensary, and, while given opportunity for exercise, well fed and taken care of in general, the leprosy seemed to have taken on a rapid process of evolution. He is now isolated at quarantine.

The interesting problem in connection with this case is, what shall the city of St. Louis do with him? To keep him at quarantine will involve the expenditure of at least one thousand dollars to build a suitable isolation house for him, and at this writing this has been done. In addition to this, it is necessary to have an attendant and sundry other expenses for this veritable "white elephant" with which the city is burdened. What makes the matter rankle most deeply in the breasts of the authorities is the fact that all these expenditures have been made for one not a citizen and who can never become such. An application has been made to the Marine Hospital Service to transport him to Molokai, where the Hawaiian lepers are isolated, and the request has been met with a flat refusal. The same answer has been made by the Louisiana authorities, who do not care for an accretion to their leper colony. The railroads and other transportation companies refuse to carry him so as to enable the city to

send him back to China, and the prospect presented is to have to keep the leper until he dies. This is anything but encouraging, and yet there is no provision made by Federal or State laws for the disposal of such unwelcome as well as dangerous guests. This question is one of more than ordinary importance to all cities in the United States.

Under the present almost unanimous consensus of opinion that leprosy is contagious, the only rational manner of disposing of cases is by isolation. Hansen of Bergen, Norway, the discoverer of the bacillus of leprosy, solved this question of complete isolation by shipping the lepers to the United States. Very effective and convenient, if not entirely satisfactory to the party of the second part. Ashmead of New York has been strenuously working to have an international agreement adopted by all civilized governments by which each one would provide leper asylums, in which all lepers found in that country could be isolated. Millions are spent by these same governments for useless matters, but not a sou will they appropriate for the protection of their own citizens. It is a pity that every country does not possess a few persons of energy sufficient to influence national legislators to adopt measures of this kind. There is no doubt whatever that a marked diminution in the number of cases would soon be observed by adopting a strict system of isolation. This latter will force itself upon this country when a due appreciation is arrived at of the increase in the number of cases observed. This is not a relative increase, but an absolute one. We are gaining them chiefly by importation, as the disease often does not develop until the leper has been here for several years.

It would simply be a piece of supererogation to discuss the question of the contagiousness of leprosy. The contagionists are numerous and give strong arguments in favor of their views. They cite numerous instances of the disease becoming endemic in countries where it was never known before, and trace the spread to one leper, as in the case of the Sandwich Islands. These arguments are again combatted by the non-contagionists, who put up a strong argument in favor of their opinion. Of course, no one but a leprologist is competent to express an ex-cathedra opinion on this subject, and among these is one who has observed lepers for many years. We refer to Zambaco (Pasha) of Constantinople, the eminent leprologist, whose book "Voyages

parmi les Lepreux," is not only most interesting, but one calculated to furnish much food for reflection.

However, if we grant that the non-contagionists are correct in their position, there can be no possible doubt that infection is not only possible but actually occurs. It may be claimed that a susceptibility to the acquirement of the disease must exist in the affected individual; but this does not lessen the danger of its spread. That Caucasians are susceptible has been evidenced by the large number of lepers in Norway, Finland, and other countries. It is also a fact that all the lepers who returned from the Holy Land during the Crusades were not syphilitics, and it is equally certain that the strict isolation then practiced practically wiped out leprosy from Europe. This of itself is enough to show that isolation is the only rational method of dealing with the disease. It is not only rational, but it is the only proper method and is really an absolute necessity for the protection of the majority. This is really the paramount issue and will eventually become the law.

It is now time that some action was being taken by the United States government to establish a National Leprosery. It has been objected by some that no state would tolerate a national leper asylum. This can be easily obviated by placing such hospitals on government lands. This is the only logical solution of the problem and it is a necessity of paramount issue. Those who are interested in the leper problem are all of one mind on the subject of isolation, and the hope of all is to see it international in scope and character.

Removal of Rio Chemical Co.—The Rio Chemical Co. has removed its Lares and Penates to New York City, and no doubt, from a business point of view, this will prove most advantageous. We, in common with many other St. Louisans, are very sorry at this move, more especially as Dr. J. J. Lawrence has established his home in Gotham. There is one thought which remains to us, and it is of a most consoling nature—the products of the Rio Chemical Co. will be kept up to the high standard they have attained, and the medical profession and their patients will not have to suffer on account of the removal.

SEVERE NEURASTHENIA DEPENDENT UPON ANEMIA.

BY ISAAC MAYHUGH, M.D., INDIANAPOLIS, IND.

The following case history is interesting for two reasons: First, because the unusually severe neurasthenic symptoms, amounting almost to a decided melancholia, seemed to be entirely due to the patient's anemic condition; and, second, because of the prompt and progressive improvement, with increase in weight, which commenced almost immediately after the institution of systematic treatment with hemaboloids, although the various tonics and alteratives continuously administered during the first four months in hospital failed to be of any service.

M. T., age 40; female; white; married; housewife.

Family History.—Father was a soldier in the War of Rebellion; received some injury about the head, from which he suffered temporary periods of insanity lasting from a few days to a week. At such times he was irrational and sometimes violent; died in the insane asylum at the age of 70. Previous to the war was perfectly well.

Mother died of cancer of the intestine at the age of 65. Previous health good, with the exception of an occasional derangement of digestion.

One brother and one sister living, in good health. One brother and one sister dead.

Personal History.—Patient had ordinary diseases of childhood, with complete recovery from each. Never had a serious illness. Menstruation at 16; painless and regular. Married at 33; three children. No miscarriages; labor in each childbirth normal.

Present Trouble.—Patient complains of palpitation of heart, dizziness, and loss of appetite, with periods of depression and worry over trivial household affairs. Three months after delivery she sought medical advice and was admitted to the Union State Hospital, February 11, 1900.

Physical Examination.—Height 5 feet 4 inches; weight 79 pounds. Anemic, wasted, dilated pupils, and dry, cold skin. Lungs normal.

Pulse rapid, soft, compressible. Systolic murmur in second interspace; hemic murmur in right side of neck over jugular vein. Spleen enlarged; liver normal.

Tongue coated, pale, flabby; bowels sluggish and constipated. Patient refused all food, and attendant was compelled to feed by force.

Patient is also troubled with insomnia, bodily enfeeblement, and numerous disagreeable sensations. Reflexes exaggerated; gait normal; station unstable; eyes normal; urine clear. Specific gravity 1008; reaction acid; albumen present in small amount; sugar, none; urea, 8.10 per cent.

Blood Examination.—Color index low; hemoglobin, 60 per cent. Red cells, 2,500,000; white cells, 14,000.

Diagnosis.—Neurasthenia, due to anemia.

Treatment.—Rest in bed; massage; electricity; liquid diet. Patient fed every three hours. Arsenious acid; elixir of iron, quinine and strychnine. No improvement.

Hemaboloids, one-half ounce in half glass of milk three times a day, was commenced June 20th.

Date.	Weight.	Hem.	No. of Red B. Cells.	No. of White B. Cells.	Medication.
6-20	80	60%	2,800,000	12,000	Hem., ℥ss. tid.
7-20	85	65%	3,000,000	10,000	" ℥j. "
8-25	91¾	70%	3,200,000	9,500	" ℥j. "

Patient continued to gain in weight, strength and general well-being; the nervous symptoms cleared up entirely, and on September 30th she was discharged perfectly well.—*Denver Medical Times.*

Notice to Members of the Thirteenth International Congress of Medicine.—We have received the following communication: The Secretary-General has the honor of informing the members of the Thirteenth International Congress of Medicine that the printing and forwarding of the volume of General Transactions and of the 17 of the transactions of sections is entirely finished now.

Any member who, by some error, should not have received the volumes to which he is entitled is hereby requested to address his complaint to the publishers of the Congress, Messrs. Masson & Cie., 120, Boulevard St. Germain, Paris.

After December 31, 1901, no complaint will be acknowledged.

LESSONS OF A DECADE IN HYDROTHERAPY.*

BY SIMON BARUCH, M.D., NEW YORK.

Some thirty years ago, while engaged in studying medical history, my youthful and impressionable mind was startled by the discovery that the most renowned physicians were with few exceptions followers of the Hippocratic vis medicatrix naturæ doctrine, and that this therapeutic doctrine included reliance upon water as a remedial agent. Indeed Hippocrates entertained a more correct estimate of the action of water in diseases than does the average practitioner of this enlightened era. He taught that cold water stimulates; while the modern physician appears to believe that cold water shocks, *i. e.*, depresses. My respect for this remedial agent, of which I had known almost nothing, was aroused by reading that in ancient times men like Celsus, Coelius, Aurelianus, Antonius Musa, Paulus, Ægeneta, Asclepiades, the medical advisers of emperors, poets and philosophers, were active and even enthusiastic believers in it, while centuries later Vander Heyden, Hufeland, Huxham, Cheyne, Magendie, Charcot, Dujardin-Beaumetz, Niemeyer, Traube, Leyden, Erb, Nothnagel, Ziemssen, Krafft-Ebing, had advocated hydrotherapy with more or less warmth and earnestness. Indeed the history of medicine would show that the estimate of its value rose and fell with the rise and decadence of knowledge.

About six years ago a symposium discussed in the New York Academy of Medicine the stability of remedial agents. Being called upon to discuss it from the standpoint of the general practitioner, I directed attention to the historical fact that of all the remedial agents applied in the days of Hippocrates only two are to-day used in active practice, viz., regimen and water.

Why has water survived the vicissitudes and changes of medical practice of two thousand years? The fate of the most universal and longest enduring remedy—venesection—furnishes the answer. It could not bear the search-lights of modern physiology and pathology. The action of water on the contrary is based upon rational principles—upon a physiologic basis, which becomes more and more evident as our insight into the nature and course of diseased processes is made more clear by modern investigation. We know to-day that hydrotherapy is but the application of temperatures through the medium of water which by

*Read by invitation before the Philadelphia County Medical Society, May 8, 1901.

reason of its physical property absorbs and gives off temperatures very readily. Cold and heat are irritants, which act as physiologic stimulants when mild and which are depressant to the point of destruction when intense. By judiciously arousing these well-known effects in the sensory terminals and vascular area of the skin a peripheral stimulation is evoked which, like all such effects, is conveyed to the central nervous system and reflected upon the life-sustaining organs. We increase the intensity of this response by increasing the intensity of the peripheral irritation judiciously adapted to the individual case. This is the principle of hydrotherapy in brief. Therapeutic effects are evoked by peripheral irritation through cold and heat applied with water. Indeed I am not overestimating the case when I say that just as sound may be elicited by touching the keys of a piano, so may therapeutic effects be elicited by touching the sensory terminals with cold and heat. And just as the trained musician elicits those harmonious sounds called music by his skillful touch, so may the trained physician elicit harmonious and powerful therapeutic effects by the skillful irritation of the sensory terminals by various hydriatric procedures. In accordance with physiological laws this peripheral irritation or stimulus produced by cold and hot water is transmitted through sensory tracts to the central sympathetic systems and reflected by motor tracts to all parts of the organism. Here then is the simplest rationale of hydrotherapy. It explains the soothing effect of a warm bath, the stimulating effect of cold dashes in asphyxia and syncope, the awakening effect of the cold douche in narcotism, the vivifying effect of the cold bath in fever lethargy, as clearly as the invigoration of the hypochondriac neurasthenic by similar procedures.

Why has the medical profession been so hesitating in the recognition of hydrotherapy? Among several reasons let me advert to one which is rarely mentioned. Hydrotherapy has erroneously been too often regarded as a cold water method, and shock from cold water has, like a dread spectre, affrighted doctor and patient alike, imbuing the one with doubt and the other with fear. Often has my suggestion of a cold bath been met with the anxious query from the attending physician: Will it not be too great a shock to the tottering heart? This is the result of faulty teaching. Shock is "a depression of the vital powers." If cold pro-

duces such depression why are we taught to dip an asphyxiated infant into cold water and to bathe a frost-bitten foot with cold water and to apply a cold douche to the narcotized? The truth is, as Hippocrates taught two thousand years ago, cold water stimulates when judiciously applied. If instead of bathing a fever patient in water at 70° with constant friction we placed him in water of much lower temperature without friction, shock would be produced, the heart would indeed be endangered; if instead of rubbing the frozen limb with snow or cold water we wrapped it in snow or ice, necrosis would indeed ensue; if instead of alternately dipping the atalectic infant rapidly into hot and cold water, we submerge its body into the latter, shock and death would result. These are such self-evident propositions that it would be an insult to your intelligence to mention them were they not constantly lost sight of and did I not often meet instances which force me to bring them to the attention of otherwise intelligent colleagues. Moreover many text-books are flagrantly deficient on this point, as witnessed by the following verbatim extract from one of the most prominent published in 1898: "Another way of applying cold is to put the patient in a cold bath and *leave him there for a certain time.* In the new pharmacopeia of the hospital the cold bath is stated to be water at 65°, or reduced by the gradual addition of ice to 40° F. or below. Now the cold bath is a very efficient means of reducing temperature." After directing his hearers to watch the mouth temperature, which by the way is fallacious during the cold bath, this lecturer warns that "the temperature of the body may fall so low that the patient may become collapsed and even die." Administered in this improper manner, cold water is certainly to be feared as a two-edged sword.

It is the great virtue of hydrotherapy that it admits of the application of cold and heat from the mildest form upward, as is evidenced in daily practice, from the brief sprinkling of the face in syncope to the more or less prolonged submersion of the entire body in typhoid fever; from the simple mopping with a wet washcloth to the douche of forty pounds pressure. This brings me to call your attention to the manner of grading or dosing the external application of water. Here we have great latitude, because there are three elements of dosage at our disposal which may be used alone or in combination, viz.: the (1) duration, (2) temperature, and (3) pressure. To illustrate:

1. The influence of duration is demonstrable by dipping one hand into water at 40° and removing it quickly; the result will be a tingling sensation followed by reaction. Submerge the other hand into the same water for ten minutes if so long a dip can be borne; the result will be pain, chilling, cyanosis of the skin and no reaction, unless assisted by friction. The former is a stimulating effect, the latter a depressing one, entirely due to the duration of the procedure. This simple experiment demonstrates that by duration we may grade the effect of cold applications.

2. The safe limits of temperature in the external use of water are 40° to 110° F.—an enormous latitude when we consider the different effects that may be elicited by every five or ten degrees increase or diminution of temperature.

3. The pressure under which water may be applied also affords latitude in the production of effects. Place a person quietly into a tub of water at 60° for several minutes and he will shiver and become depressed. Place the same person in front of a douche of 60° and twenty-five pounds pressure and he will feel stimulated by the application. Every addition or diminution of five pounds pressure produces a similar effect.

We have no such latitude in the dosing of medicinal agents. This is a potent reason for better instruction on this subject in our schools, and so long as the latter is lacking for physicians informing themselves in works on hydrotheraphy rather than entrusting this important matter to nurses and masseurs, whose claims are usually in inverse proportion to their knowledge.

There are many reliable experiments on record to explain the rationale of the action of water in disease. My time is too limited to enter fully into them. A few examples may suffice to demonstrate that there is no remedial agent whose action is more readily explained. That the circulation of the blood, for instance, is under complete control of hydriatric procedures was clearly shown by Max Schüller's experiment of trephining a rabbit so as to expose the vessels in the pia mater. When the animal was placed in a tub of cold water the pial vessels dilated, the brain protruded and pulsated actively; when the animal was placed in warm water the pial vessels contracted, the brain sank, and the rabbit became drowsy. Thus was shown the power we wield of producing anemia or hyperemia by the application of cold and heat. The effect of hydriatic procedures upon the com-

position of the blood has been demonstrated by Winternitz, Rhovigi, Thayer, Breitenstein, Loewy, myself, and others. Cold applications produce great increase of red and white cells in blood taken from parts not subjected to the cold, as the lobe of of the ear, showing that this increase is attributable to the great fluxion produced, by which cells floating sluggishly in outlying districts are drawn into the general current.

Hydrotherapy in Acute Diseases.—The immediate and remote effects of cold procedures in acute diseases are explicable upon a rational basis. Unfortunately many physicians otherwise well informed still explain its action upon an antipyretic basis—a fallacy which I have for ten years been endeavoring to remove.

The idea does not appear to have percolated through the medical masses that the antipyretic is secondary to the nerve stimulating effect of the cold water. Fear of the so-called shock has, as I have stated, long operated against the adoption of effective cold procedures, because of this erroneous antithermic idea. Physicians have been taught to increase the dose of castor oil, morphia or other medicine if they desired an intensified effect; hence they naturally order the cold bath made colder when the temperature does not yield. As a result they obtain depression from injudicious dosage, and they reject a remedy which judiciously used would produce quite different effects. The cold bath, indeed every cold procedure, has for its chief object the enhancement of the resisting capacity of the patient to the disease. In an acute disease like typhoid fever this is accomplished, first, by the well-known primary effect of cold in contracting the cutaneous vessels. This is followed by reaction, which is manifested by a tonic dilatation of the vessels, whose walls had previously been in a semiparetic state by reason of the prevailing toxemia. The heart disease is thus materially aided in its labor to overcome the unresponsive condition of the peripheral vessels. Heart failure, which stands as a spectre at the bedside of every case of infectious fever, is not due so much to enfeeblement of the cardiac muscle by hyperpyrexia as to the imperfect action of the peripheral vessels, which allow the blood to glide through them without resistance or with greatly diminished resistance. Cold water applied with friction stimulates the cutaneous arterioles to a more nearly normal action. As has been well said by your own Hare, like sanding the track for an ineffectively laboring lo-

comotive, cold water increases peripheral resistance and enables the heart to renew its vasomotor tone. Arterial tension is increased, the danger of failure of the laboring heart is overcome, mortality is decreased because an improved circulation forestalls many lethal complications.

The excitation of the terminal sensory filaments in the skin which follows the repeated impact of cold water is rapidly conveyed to the central nervous system, and thence reflected upon the life-maintaining organs whose functions have been more or less impaired by the existing toxemia. Each bath or other cold procedure gives a fillip to the depreciated nerve centers and sends new life to the organs depending upon them. The whole machinery of the organism receives a refreshing impetus, the impression being more or less enduring according to the temperature, duration and procedure to which the patient is subjected. Whoever has witnessed the dull eye of a typhoid patient brighten after the cold friction bath; whoever has felt the dicrotic galloping pulse gain in force and diminish in frequency, the deadly pallor of the trunk and cyanotic face disappear; whoever has noted the enormous increase in quantity and toxicity of the urine; whoever has observed how the previously restless, unhappy patient falls into gentle slumber after a properly administered cold bath, must be convinced that he stands in the presence of a powerful and salutary agent, the like of which does not exist in medicine. Indeed it is not an inapt simile to say that just as the vegetable organism, famishing under a torrid summer sun, is revived by a cooling shower, so is the human organism prostrated by fever vivified by cold friction baths. In order to insure this much desired result, however, reaction must follow the cold baths; otherwise it fails. This salutary effect can be produced only when the temperature of the water and the duration of the procedure are adapted to the indications of the case and the reactive capacity of the patient. The following scheme of don'ts affords a summary of what to do and what to avoid in the application of cold water in febrile diseases. I have adopted them as guides in the hydriatic management of fevers:

Don't bathe with cold water to reduce temperature, but to refresh the fever-stricken patient.

Don't permit cyanosis or chattering teeth; stop.

Don't stop bathing because patient complains of chilliness, unless the teeth chatter.

Don't raise bath temperature on the latter account; shorten bath and increase friction.

Don't neglect friction during every cold procedure; it prevents chilling.

Don't disregard the well-ascertained fact that the Brand bath (of 65° to 70° F. every three hours when awake, with active friction) is the ideal bath for typhoid fever only.

Don't use the Brand bath in a bath-room.

Don't give up cold bathing because the ideal bath is not obtainable; other procedures are useful.

Don't use the ice coil to the abdomen; it has no refreshing effect and renders the skin beneath it cyanotic.

Don't lose sight of the fact that the chief aims of all cold procedures is reaction.

Hydrotherapy in Chronic Diseases.—The rationale of the action of cold water in chronic diseases is also explicable on physiological principles. The stimulating effect of water ten or more degrees below the body temperature, upon the cutaneous sensory terminals is transmitted, as in acute diseases, to the central nervous system. The inspiration is deepened by reflex action through the vagus, the heart action is improved through increased resistance of the contracted arterioles, and they are afterward dilated in tonic fashion, showing a reaction denoting the passage of larger quantities of blood through them; an increase of hemoglobin and blood-cells in the cutaneous blood has been often demonstrated after cold procedures; more blood-cells are therefore driven through the lungs also. The exposure of a large number of blood-cells to the air enhances oxygenation materially and renders cold procedures followed by reaction the best hemoglobin producers. When these cold procedures—be they ablutions, drip sheets, packs, or douches—the latter are the most useful—are repeated daily or oftener, the skin receives a neurovascular training, the refreshing and invigorating effect of which is felt throughout the entire system. Even in health the man who indulges in the cold morning tub testifies by the ruddy appearance of his face, his pink nails, and his general vigor, to the fact that he has put his cutaneous vessels and nerves through a course of training similar to that which the athlete obtains for his muscular development as the result of his daily muscular training. We must be governed by the same principles in the

management of chronic diseases as in acute diseases. During the past decade the use of water in hitherto intractable chronic diseases has led me to greater confidence in this simple agent, and to its increased application in the scheme of management.

It is proposed to illustrate this statement by a few examples.

Phthisis.—Of all chronic diseases phthisis pulmonalis is probably the most prevalent and the most destructive. The method now universally adopted, and which I emphasized ten years ago (*Transactions of the New York State Medical Society*), for the management of these forlorn cases, combines the open air, dietetic and water treatment. This method was devised by Brehmer, the father of modern phthisis management. In his book, *Die Therapie der chronischen Schwindsucht*, he dwells with strong emphasis upon the value of hydrotherapy in phthisis. And in accordance with his suggestion and his example in the great sanatorium constructed by him at Goerbersdorf, every institution of note follows his advice. I have personally inspected many of these, among them the model institution of Ruppertshein and Dettweiler's sanatorium at Falkenstein, also Roempler's and Brehmer's at Goerbersdorf, and found a douche apparatus in each. A recent excellent and complete article by Dr. J. H. Kellogg (*Medical News*, November, 1900) epitomizes the utility of water in this disease as follows: "It is my firm belief that the general adoption of hydriatic measures in the treatment of pulmonary tuberculosis by the profession at large, and especially the application of these measures to the disease in its incipient stages, would result in saving at least nine-tenths of the sufferers from this disease from the untimely death to which almost everyone is doomed under ordinary medical management. The opinion of this able and many-sided physician is fully endorsed by that most successful prize essayist on pulmonary tuberculosis—Dr. Knopf—who opens an able chapter on hydrotherapeutics of this disease, with the statement that "after aërotherapy, hydrotherapy comes next in importance in the treatment of pulmonary tuberculosis." And these opinions I have amply verified. Even when patients have found it impossible to leave their homes for a more favorable clime, I have seen in private and hospital practice in New York City results in preventing the development and checking the progress of this usually progressive malady which have convinced me of the substantial value of judicious hydrotherapy.

The results are directly traceable to the powerful influence of the external application of water with friction at a temperature five to ten degrees below that of the patient. The gradual neuro-vascular training thus produced awakens appetite, nutrition, hematosis and constructive metabolism in such manner that the blood is rendered capable of resisting the bacillus tuberculosis upon the patient's vitality.

Clinical examples are abundant. I have selected one brief history because it is a case of long-standing proof:

Mr. S., aged twenty-six years, merchant, living in the South, was on a visit to friends in the summer of 1892. He consulted me at Long Branch on July 29, 1892. He was pale, emaciated, and had been losing flesh and coughing several months. Had no appetite. Temperature 101°, pulse 120. Dull note over supra-clavicular space; respiratory murmur harsh; expiration prolonged. He was put to bed for a few days until he showed a temperature of 90° on July 31st. He was then sent to the Hydriatic Institute for water treatment. His sputum contained tubercle bacilli. He weighed 106 pounds. A hot-air bath to improve the peripheral circulation and enhance his reaction was ordered. This was followed by the circular douche of 95°, reduced gradually to 80° for forty seconds, under ten pounds pressure, gradually increased to twenty pounds. This was followed by the fan douche at fifteen pounds pressure, gradually raised to thirty pounds for a few seconds at 70°. An eminent specialist pronounced him phthisical, and cautioned him earnestly to leave the city, saying that he could not live in this climate. Regarding his chances as far better under systematic hydrotherapy than under the climatic change recommended, I counselled him to remain in the city, and the result happily justified this advice. One month after beginning treatment he was able to take water at 70°, with brief sprays even at 40°. He had gained seven and one-half pounds. Appetite was excellent; cough still troublesome because of tuberculous laryngitis. The spray temperature was diminished so that on the 19th of September it was only 64°. Bacilli were still present.

On January 9, 1893, Dr. Freudenthal, who treated his larynx, wrote: "Patient looks and feels much better; has gained ten pounds. Ulcerations have healed under lactic acid and 20 per cent. menthol. The improvement in the case is remarkable."

On January 21st, six months after beginning treatment, he had gained sixteen pounds, weighed five pounds more than in health, and Dr. Van Giesen reported that no tubercle baccilli could be found.

A return of his symptoms five years later caused him to go to a sanatorium in the Black Forest, whence he returned in good health. The patient is still living in this city, and with the exception of a laryngeal irritation is well and able to pursue his avocation.

Institution treatment is not necessarily required. Every home has sufficient facilities for the application of some form of air and water treatment. If the principles governing the latter are understood, and the unfounded fear of shock is thus removed, very cold water may be used with great advantage in building up the vital resistance.

Neurasthenia. — Another trying if less fatal disease which offers a fruitful field for hydrotherapy is neurasthenia. Mild forms yield readily to removal from unfavorable environments, improvement of diet, habits, exercise, rest, etc. In the more obstinate forms, when all these have been tried without result, the addition of some form of hydrotherapy almost invariably changes the entire aspect of the case. In this age of restive striving after wealth and fame and social distinction, neurasthenia has become one of the most common maladies, so that every physician in acitve practice has one or more of these unsatisfactory cases almost always on his list. It has become the fashion to accept the nation's novel combinations of so-called nervines, nerve tonics, tissue builders, hypnotics, analgesics, which the busy chemist evolves for the enterprising manufacturer, who in turn sends his polite purveyors and agents to the doctor's office to solicit their application through gratuitous samples. I see many cases that have gone the rounds of all these modern nerve rest[illegible] vain. I see few cases in which any kind of methodi-c[illegible]rapy has been applied. Some may have received [illegible]sponge with cold water or to plunge into a cold tub, [illegible]efinite prescriptions of temperature or duration, so [illegible] prescribed by myself they raise the objection [illegible]ar cold water; it always disagrees, shocks [illegible]n, etc. And yet of all remedial agents that [illegible] best works and essays on neurasthenia, the

methodical application of water has been given the palm by men like Eulenberg, Jolly, Strümpel, Kraft-Ebing, Erb, and in our country by Peterson and Putnam of Harvard and Collins.

The neglect of hydrotherapy by the average practitioner and even by many neurologists may account for the sad fact that we hear of so many neurasthenics wandering from one doctor's office to another and sooner or later becoming the prey of charlatans and Christian scientists. These patients present every phase of depreciated vascular and nerve condition. Some present the appearance of health; many look wan and worn from loss of appetite and sleep; digestion is impaired; introspection renders them and all around them miserable. Some of them have been benefitted by treatment, rest-cure, change of air and scene; but on their return to an unfavorable environment all the old symptoms gradually but surely return. Again they totter on the brink of invalidism; some give up in despair, believing their reason threatened; others insist that their memory is impaired; others become the prey of morbid fancies—agorophobia, nosophobia, insomniaphobia (if I may coin a word). They become the despair of family, friends and physicians.

What prospect is there for such cases? I may say from actual observation that in a large proportion, if there be no organic basis nor positive hereditary predisposition to insanity, the result of a methodical course of hydrotherapy in connection with properly adjusted diet and environment will prove a revelation. The most useful procedures are the dry pack, which consists of a snug wrapping of the patient in heavy woolen blankets for about an hour, so as to accumulate heat. Successive parts of the trunk are then uncovered and treated to a rapid and brisk rubbing with a bath-glove or wash-rag saturated in and squeezed out of water at 85°. After drying and good friction the patient is sent into the air for gentle exercise. Every day the packs and wet rubbing are repeated, the water temperature being reduced two or more degrees daily until 60° are reached. The patient's reactive capacity having been trained by these daily neuro-vascular gymnastics, he is subjected to more decided hydriatic procedures. Standing in water at 100° in a warm bath-room, the patient may be subjected to affusions. From a foot tub containing water at 80°, which may be daily reduced two or more degrees until 60° are reached, water is dipped with a long-handled basin or large tin dipper and

thrown with force upon the upper back and successively over each shoulder and anterior part of the body. If this be done rapidly, followed by rapid drying, dressing and exercise, the patient will not become chilly. Every day larger quantities of water may be used, always avoiding chattering of teeth and cyanosis, but not desisting because the patient complains of feeling cold or chilly. These and other home procedures, applied with due regard to the patient's reactive capacity and as carefully supervised by the physician as he would supervise the administration of any powerful medicinal agent, will bring relief and perhaps entire recovery to a large proportion of cases. If, however, skilled nurses cannot be obtained or home treatment is otherwise inconvenient or difficult, or if the domestic treatment has not been successful, a systematic course of douches, which may now be obtained without making the patient an inmate of a sanatarium, will prove satisfactory in many apparently hopeless cases. The thermic and mechanical stimuli involved in douches delivered from an easily graded apparatus are capable of arousing depreciated neurons, enhancing vascular activity in the brain, and improving general and local nutrition. The cortical centres, which are the focus of failure in these depressed neurasthenics, feel the impulse of the better circulation and nutrition, and are restored to the normal controlling influence from which the etiological factor involved in the case has deposed them. Morbid ideas and iliusions vanish, introspection ceases, the patient slowly but surely regains his neuro-vascular equilibrium. Moreover these results obtained under judicious hyrotherapy are far more euduring than those following other methods alone.

Eight years ago I was asked by Dr. Ralph Waldo to see a middle-aged lady, mother of several children, on whom the doctor had made a successful perineorrhaphy and trachelorrhaphy. Although these operations restored the normal relations and size of the uterus, they failed in restoring the patient's health. She continued to be an invalid, and nothing could induce her to leave the bed. She insisted upon having her uterus, which she regarded as the cause of her invalidism, removed. The late Dr. Charles Carroll Lee was called in and agreed with Dr. Waldo that there was no indication for operative procedures, and suggested that hydrotherapy may arouse the patient from her uterophobia. I visited the patient with Dr. Waldo in her suburban home and

advised a systematic course of hydrotherapy. With great difficulty she was brought to the city and entered an institution, being practically carried by her husband and brother from the carriage to the room. Without going into detail I may say that she was a pronounced type of melancholic neurasthenia. Her reaction was very feeble; she was gradually trained to accept colder water and large quantities of ablution, affusions, and half baths, and later she received a systematic course of douches which restored her vitality completely, so that after six months' treatment she was anxious to use the bicycle. With some directions for a careful daily cold plunge she was discharged cured, and had remained well up to my last information.

I hope Drs. Wharton Sinkler, James C. Wilson and H. A. Hare may relate the clinical histories of cases kindly referred by them for hydrotherapy—cases which had resisted the most skilful management and which yielded to systematic hydrotherapy.

Diabetes is a malady which we are in the habit of treating in an empirical manner, with little hope of restoration to health. To diminish the entrance of sugar-producing foods into the system is the leading principle in the "treatment of this disease." That lives have been prolonged by strict attention to diet there is no doubt. But how great is the sacrifice of comfort and happiness these patients are too often called upon to make when following conscientiously the rigorous dietetic orders few physicians realize unless they or some near member of their family be a subject of this malady.

Let me briefly advert to a method of managing the patient in this disease which has been rewarded with a success to which I had been a stranger during the first twenty-five years of my professional career, and in the scheme of which hydrotherapy enters very largely. Since I read the convincing physiological argument made years ago by Bouchardat aud Frerichs in favor of systematic exercise in diabetes I have endeavored to translate their reasoning into practice. In diabetes we know that the glycogenic function of the liver is in abeyance and greatly impaired, while the muscles, which also possess glycogenic function, fail by reason of the lassitude incident to this disease. There being no agent by means of which the glycogenic function of the liver can be enhanced, and the causes of the loss of this function being still obscure, there is nothing left but to limit the supply of

sugar-producing element. We are, however, in a more favorable position with regard to increasing the functional activity of the muscles, and thus enhancing the well-known sugar-converting function of their inner fibrillar substance. By increasing, therefore, the circulation in the muscles (the principal effect of exercise) we may enable the system to appropriate a large proportion of the sugar circulating in the blood, and thus prevent its loss to the system. Clinical experience is happily in entire accord with this deduction from physiological observations. The latter are not new, but their true import is unfortunately not recognized sufficiently to become a part of a scheme in treatment. Diabetic patients are warned to live hygienic lives, to keep clean and take plenty of exercise. The insufficiency of directing such a patient to exercise is soon made evident if he be kept under observation. He reports that he is unable to exercise much without great fatigue. Inasmuch as the latter is regarded as detrimental, less exercise is ordered and taken until it is abandoned altogether. It has long been my custom to insist upon regular and sustained exercise, by which alone muscular glycogenesis can be stimulated. This requires great moral courage and energy. So great are the languor and inertness of the patient that it is almost impossible to overcome this. And here is the point where hydrotherapy enters as an important remedial agent. That great physiologic stimulant, cold applied through the medium of water, especially when combined with the mechanical stimulation of the douche, arouses nerve activity, increases vital capacity, contracts muscular tissue, improves nutrition and hematosis, and thereby increases energy, removes languor and indisposition to exercise. When moral suasion has failed, and even the certain prospect of further invalidism has not stimulated the diabetic to effort, the systematic daily neurovascular training by the cold douche has often requited me by a renewal of life, a quickening of all the functions, an elevation of vital activity, which brought the patient to tolerate and even enjoy muscular exercise, without fatiguing him. Not alone do we thus obtain the salutary influence upon the muscular glycogenesis, but the improvement of the patient's general health contributes to the enhancement of his digestion, assimilation and more normal excretions; weight is gained, the patient and friends are cheered. Such stimulating effect upon the nervous system in a disease which is so largely

neurotic conduces vastly to the restoration of health. It has been my frequent observation that strict rules of diet may be relaxed where systematic exercise, of which I insist upon having a record on the pedometer, and hydrotherapy are added to the management of diabetes. Here again we have a striking illustration of the fact that hydrotherapy though not directly curative aids in enhancing the resistance of the human organism to disease.

One brief clinical history of a case of long enduring restoration must suffice to illustrate my statements.

Mrs. S., aged sixty-five years, consulted me on March 2, 1892, for great lassitude, loss of appetite, depression of spirits and other symptoms pointing to diabetes. Examination revealed 6 per cent. of sugar, specific gravity 1040, quantity in twenty-four hours eighty-one ounces. Weighing nude 253 pounds and being quite inert and languid, exercise seemed utterly out of the question. A strict antidiabetic diet was prescribed and rigidly adhered to, but she could not walk two blocks without dyspnea and great exhaustion. Despite the most laudable persistence in her efforts to carry out my instructions for one month she only lost one-half per cent of sugar. In order to reduce her weight and improve her nerve and muscle energy, she was induced to drive in a carriage five miles to receive the following treatment: Once a week she received a hot-air box bath until she perspired freely. This was followed by the circular douche at 90° for half a minute, and by the fan douche at 80°. This was succeeded by active massage and resisting movements for fifteen minutes. Five times a week she received a tonic hydriatric procedure (beginning with a dry pack for half an hour for the purpose of filling the cutaneous vessels, and followed by a general ablution at 70° with good friction). On April 15th—*i. e.*, in two weeks—she had lost six pounds and was able to walk six blocks twice a day. A week later specific gravity of urine was five points less, sugar three-fourths per cent. less. Wet packs in sheets wrung out of water at 50° were each given for forty-five minutes, followed by half baths of ten minutes at 85°, with active friction in tub, followed by massage and resisting movements for fifteen minutes. The object of this procedure was to increase tissue change and improve the circulation in the muscles. This effect was increased a month later by substituting the jet douche under thirty pounds

pressure at 60° F. for the half bath. It was delightful to observe how this large and unwieldy woman gained in energy, desire and ability to walk, so that at the expiration of three months, despite the summer heat, she was able to walk four miles a day, morning and evening. The diet remaining the same, sugar decreased gradually from the time she was able to walk a mile daily, until eight months after beginning treatment she was entirely free from sugar. She is still free from diabetes, although eight years have elapsed. Her diet is no longer strict, the only precaution being to resort to more muscular exercise when farinaceous food is indulged in.

If time permitted I should gladly dwell upon other chronic affections in which hydrotherapy has done signal service.

Cases of nervous dyspepsia, for instance, which had run the gamut from pepsin to the empirical hot water and Saulsburg steak, thence to the scientific gastrologists who base their treatment upon test-meal analyses, have been restored to health when the stomach was not regarded as a special organ, but as an integral part of the whole organism, and the nervous system which supplies the stomach with functionating capacity was refreshed and invigorated by daily neurovascular gymnastics with cold water. My case records are filled with such achievements.

In *hysteria*, whose pseudo-manifestations so often strike terror into the hearts of families and drive the doctor to his wit's ends, Charcot has signalized his greatest triumphs with the spinal douche. Erb, Kraft-Ebing and Charcot's successors in Salpêtrière have confirmed the paramount value of this special treatment. The records of the Montefiore home, as well as of my private practice, have established the clinical faet that in the most obstinate and unpromising forms of hysteria the cold rain, fan and jet douche carefully adapted to the case is often the last and best resource.

Obstinate cases of *neuralgia*, *sciatica*, *neuritis*, *lumbago*, and allied diseases, are relieved and often removed by various hot applications, followed by cold douches. "Pain is the prayer of the nerve for better blood," said Romberg, and I know no means of enhancing hematosis like bringing the blood to the skin and pulmonary vesicles by judiciously adapted douches.

In spasmodic and bronchial *asthma* that has resisted other treatment, marked improvement has followed under hydrotherapy. I have in mind a case in my own family which enjoyed the

kindly and most skilful management from eminent colleagues; the patient began to improve only after hydrotherapy was added. Affusions with water at 75° daily, reduced until 45° were reached, while the patient sat in shallow water at 100°, was the simple measure which proved the turning-point in this most interesting case. The douche could not be obtained because the patient was at Long Branch.

For cardiac cases you are aware what hydrotherapy in the form of the Nauheim baths has done in restoring failing or lost compensation. In these cases the effect is produced by combining the chemical with the thermic peripheral irritant.

In *angina pectoris*, which is more often of the false than the true type, a systematic course of hydrotherapy has often served me well after other methods pursued faithfully by other colleagues and by myself had failed.

Another set of cases which are greatly benefited by hydrotherapy are those unsatisfactory *rheumatic*, *gouty* and *lithemic* conditions which are the bane of the doctor's life, and which we are often so glad to rid ourselves of by sending them to the hot springs. At these resorts many remarkable cures are effected by removal of the patient from unfavorable environment and by the judicious application of baths and douches under the direction of their skillful physicians. Unhappily few of our patients are able to leave their homes for this purpose, and for these much may be done by methodical hydrotherapy at home. The course adopted at these springs may be usefully imitated wherever douches under pressure of twenty to thirty pounds can be had. This treatment stimulates the emunctories, especially when it is combined with the frequent and methodical drinking of ice water. Products of retrograde tissue change are eliminated, normal products are formed. Although the patient may lose flesh, his appetite, sleep and general comfort are increased, and if the dietary and mode of life are properly regulated his health may be entirely restored. While we cannot approach the rapid and decided effects attained by our colleagues at the hot springs, to whom such cases should preferably be referred, great relief may be afforded and even complete restoration may be slowly attained by the hot douche and bath treatment.

In this type of patients I have often observed great relief and even complete restoration slowly obtained under the hot bath, douche and massage treatment at home.

Of failures in chronic diseases I have, alas, seen too many, especially in cases referred as a last resort by colleagues whose efforts would have been crowned with success in the earlier stages of disease.

The facts and deductions of this essay are the result of observations made upon over 100,000 recorded procedures in neurasthenia, hysteria, some of the psychoses, phthisis, gout, rheumatism, dyspepsia, cardiac diseases, sciatica and other neuralgias, obesity and neuritis. The application of this method of treatment to such varied diseased conditions is rendered possible by its flexible nature, which enables us to adapt it by modifications of temperature, pressure and duration and by numerous technical details to the most varied pathological manifestations, provided the physician has mastered its rationale and mode of action and its details are not left to the judgment of bath-nurses.

By utilizing only institutions which are under medical supervision and direction the physician may obtain all the valuable effects of hydrotherapy without subjecting the patient or himself to the dangers of empirical application which has so often brought disaster to both and discredit to this remedial agent. If water is to occupy a lasting position among remedial agents, *it must be in the hands of medical men entirely*, its theory and practice must be taught in our schools and its application demonstrated in our hospitals, as is done in Vienna and Heidelberg. Only by this means will water be rescued from the hands of the empirics, who, as Kussmaul has justly said, thrive upon it to the detriment of the educated practitioner.

In conclusion, let me urge that more attentive consideration be accorded to the therapeutic uses of water; that the principles upon which its action is based be mastered; that it be applied systematically and persistently; and that the causes of failure, which will often be discovered in imperfect application, be studied.

By recording hydriatic prescriptions, as is done with the medicinal and dietetic, case histories may be made to furnish data for future guidance.

Finally, I appeal to you to further the teaching of hydrotherapy in the medical schools.

If I have succeeded in arousing your interest in this ancient but neglected remedial agent I shall be content.

A CLINICAL REPORT ON GUDE'S PEPTO-MANGAN.

BY SAMUEL WOLFE, A.M., M.D.,
Physician to Philadelphia Hospital; Neurologist to Samaritan Hospital, Philadelphia, Pa.

There may still be some doubt whether manganese is a normal constant constituent of the human blood or of any of the tissues of the body. It may not have been positively determined whether iron, when given in an inorganic compound or in pure metallic form, is absorbed by the mucous membrane of the stomach or intestinal canal, or whether it accomplishes its curative work by some occult process of stimulation of that membrane, by virtue of which it takes up with greater readiness the nutritive portions of food substances which are presented to it at the same time; or whether it plays a chemical rôle in changing the contents of the alimentary canal, so that what eventually passes into the circulation is more fitted to maintain high standards of nutrition or will prove less deleterious to the processes of life.

Even when we have combinations which, whether obtained synthetically or analytically, resemble the forms in which this metal is found in the blood, our assurance is by no means perfect that they can pass the portals of the circulation, the absorbent organs of the alimentary tract, without great risk of change from their original forms, in their contact with the substances and tissues to which they are exposed.

All these are still questions, on some of which the evidence is sufficiently positive to leave but little doubt, while on others there are so many theories that we are left to choose what may best suit the results of our own observations, if not indeed our caprice or fancy.

To the chemist and therapeutist these are certainly interesting and practical questions. Before the physiologist and pathologist still others of equal importance loom up. What are the different steps in the process by which an atom of iron, in either a food or drug, becomes ultimately an ingredient of the hemoglobin of a corpuscle, and what have been the dynamic processes with which it has associated itself up to this point? Again, what is its final destination and disposal? With what materials has it been combined, and what forces has it generated and modified by the time it has finished its course? What accounts for its disappearance under certain abnormal conditions, and why does the train of symptoms which we witness arise under these circumstances?

Again, these are facts, theories, hypotheses and speculations which we are bound to consider, and, in the light of our own reason and judgment, to determine.

But while we are thankful for all the light that can be shed on these problems, and, as members of a cultured profession, are impelled to continue their investigation, yet to the clinician their solution is not essential. Whether his path be flooded with the brightness of midday or shrouded in Egyptian darkness, he must still walk on in it. When, in the records of professional literature or in the acquirements of his own personal experience, certain means have associated themselves with consequent legitimate ends, it is his plain duty to adapt one to the other. And, again, where the means have been to a degree inadequate, on the introduction of what appeals to his reason as of a higher probable power, he must determine the claim. The clinician must not allow himself to be diverted too far into the by-paths of knowledge, lest he become timorous and undecided. The locomotive engineer, who knows the management of his engine in such a way as to start it, regulate its speed and stop it, so that he will constantly carry his train to its destination on time and without accident, and with the accomplishment of all that is expected of him at the termini and at the way-stations, is but little the better for a complete knowledge of the country through which he travels; of the industries of the towns at which he stops; of the mechanical and physical forces which rule the movements of his engine; or of the mathematical rules which govern the construction of the road.

My observations with pepto-mangan, introduced to the profession by Dr. Gude, chemist, of Leipzig, are such as can be easily confirmed by any physician, since they were all made in private practice, and rest on bedside and office notes. I have used the preparation to a considerable extent ever since it was first brought to my notice, which I think was about two years ago. Owing to some specially good results obtained I was led to the series of recorded observations on which this paper is based. They extend over four months of time, and embrace about fifty cases.

As a rule, I followed the directions issued by the manufacturers in its administration, giving to an adult a tablespoonful dose and to younger subjects a proportionate amount. Milk

seemed to be the best vehicle, and immediately before or after meals a convenient time. In its relation to food, however, I do not think we need exercise any special care as to its administration. There were but few cases in which I found any disturbance of the digestive functions by these doses, but in several there was considerable constipation induced, and in one or two some diarrhea, as the apparent result of the drug. While my experiments in this direction have not gone far enough to beget firm convictions, I am of the opinion that in the main equally good results could be achieved by a smaller average dose, and in this way the small number of untoward results might probably be still further diminished.

In one series of twenty-three cases the patients were all married women, ranging from the ages of twenty-two to seventy, who were more or less anemic from various causes. In all but five the results were decidedly satisfactory, and of these one failed to report the second time, so that the result is not known. The other four were cases of advanced organic disease, in which no therapeutic procedure could have given decided results. In nine of the twenty-three cases the results might be classed as brilliant. In all of the others I am convinced that no other preparation of iron could have done more. The condensed details of a few illustrative cases from this series follow:

A woman of 65 during several years had occasionally applied for relief from vertigo, frequent attacks of palpitation and general weakness and nervousness. She also had frequent long-continued attacks of diarrhea and some gouty manifestations in the joints. In November I found her very decidedly prostrated and anemic. She took the pepto-mangan, in connection with a carefully regulated diet (chiefly albuminous), for six weeks, and gained steadily in strength and weight. At the end of that time her symptoms had disappeared, and she claimed to be in a better condition than at any time during the previous two years.

A woman of 25, of highly nervous temperament, cultured and refined, had passed through her first confinement in May, the labor being a very difficult one, and resulting in a still birth. She grieved very much, and, though fighting bravely against her depression of spirits, by autumn she became very neurasthenic and anemic. She had morbid fears, frequent flushes and some menorrhagia. She was put to bed and given pepto-mangan and

strychnia sulphat in gr. 1-30 doses b. i. d., and recovered rapidly. She again became pregnant, and is perfectly well.

A mother of three children, aged 32, the youngest ten years of age, who has during the last year had some three or four attacks of menorrhagia, had gradually reached a quite profound state of anemia, in spite of plentiful administration of other forms of iron in the intervals of the menses. She is obstinately persistent in refusing a uterine examination, and was therefore treated symptomatically only. My recent prescription of pepto-mangan has rapidly dissipated her pallor and improved her general health.

A primipara, aged 22, was pale during pregnancy, and at the end of her lying-in, though she had not lost blood at all profusely and claimed to feel well, was very pallid. After using the pepto-mangan for two weeks her color had been fully restored.

Two young married women, both of whom had passed through a confinement within a year, were anemic, and frequent sufferers from headache and considerably debilitated. They both recovered promptly on the pepto-mangan

Another series of nine cases consists of children from infancy to the age of twelve. In all marked results were obtained.

A little girl of four for two successive summers had frequent malarial attacks of an irregular character and resulting in anemia and debility. She had been treated with arsenic, quinine, various preparations of iron, and, though responding to the drugs, was still inclined to fall always a ready victim to fresh onsets of the disease. On pepto-mangan she made steady and rapid progress toward robust health, and now is a perfect specimen of a vigorous child.

An infant of seven months passed through a siege of infantile remittent with a great deal of bowel disturbance, which yielded to quinine in the course of two weeks. Within a month the same train of symptoms developed, and quinine was again given, and followed by pepto-mangan, and since then the child's health has remained good, although several months have elapsed.

A girl of seven, who had for a long time been pale, took diphtheria. After recovery from the disease the anemia, as might be expected, was still more grave. She was put on pepto-mangan, and soon became rosy and strong.

Another girl of the same age, also habitually pallid, had wry

neck for two weeks, which disappeared under iodide of potassium, but the anemia had increased. Her restoration in color and to robust health was secured by the use of pepto-mangan for a month.

A little boy of four had measles, from which he made a good recovery. Two months later he was very anemic and listless, with poor appetite and slight feverishness. He at once improved on the pepto-mangan, and continued until fully restored.

A baby, six months old, one of a pair of twins, had developed a quite marked degree of hydrocephalus. Large thin blue veins stood in relief all over the scalp. The anemia was very pronounced. She was put on pepto-mangan, and her appearance now is much better, with strong indications of the arrest of progress in the disease.

Another series of five cases includes girls approaching or slightly beyond puberty, all anemic, and all responding to the use of pepto-mangan.

Of this class, a girl of 17, who has always been pale, thin and puny, has only come under treatment within a month. She has never menstruated, and shows but little tendency to don the usual physical habiliments of the maiden. She is under size, but has since her early girlhood always had an aged look. Her appetite is very meagre and somewhat capricious. She suffers from pains in the legs, more especially the joints, and has a distinct systolic murmur. Under the pepto-mangan she seems disposed to gain in color and appetite, and the pains in the legs have somewhat diminished. I shall watch the outcome of this case with great interest.

In submitting this report I wish to summarize these conclusions:

That pepto-mangan is a highly available preparation of iron on account of its liquid form, pleasant taste, non-corrosive action on the teeth and unirritating effect on the digestive organs, admitting thus of easy gradation of doses, easy administration to children, and avoidance of unpleasant effects in all classes of patients.

That it is an efficient and rapid restorer of the normal quality and quantity of the blood in all conditions where the state of the organism admits of this result by the administration of a chalybeate.

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A. H. OHMANN-DUMESNIL, A.M., M.D.,
Editor and Proprietor.
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EDITORIAL.

THE ASCENDENCY OF PATHOLOGY.

The trend of modern medical writers appears to be of such a nature that pathology dominates all other considerations. Whilst diagnosis is dwelt upon to a certain limited extent, pathology is made the prime issue of the subject under consideration. We have noted this more particularly in the books and journals emanating from Germany of late years. The particular portion known as histopathology is made a most prominent study, and it is in this that methods and technique reach their highest development. An immense amount of research and study has been devoted to these methods, and as a result of the researches made into staining methods we have to-day a list of stains whose name is legion. Not only this, but delvers in the field of pathology seem to have gone bacteria mad. Bacteria are found everywhere, in every lesion, in all abnormal processes, and methods of demonstrating them are cropping out daily, an equal number dying and find rest in a deserved oblivion. It is called pathology, but as a matter of fact it is microscopy. That it has its uses it were folly

to deny. These uses are principally for the purposes of diagnosis. This alone would be sufficient to demonstrate the great value and usefulness of microscopy and bacteriology. So far as treatment is concerned, we must still depend upon clinical experience and demonstration. It is certainly poor logic to say that if the bacteria which are supposed to cause the disease are destroyed that it will disappear. It is better reasoning to antagonize the particular toxine by a remedy adapted to the purpose, as has been so well demonstrated in the case of diphtheria. But how much is there in serotherapy so far? Very little that is certain, although it is still in its infancy and promises much. Of course, it cannot be denied that bacteria easily reached had best be destroyed, providing that the agent used does not prove too destructive to the tissues. But when we take into consideration the immense amount of work which has been and is still being done in bacteriology the returns seem to be rather meager, except perhaps in the way of the prophylaxis of certain diseases, such as typhoid fever. So far as histopathology is concerned, it cannot be relied upon alone for the formulation of even a diagnosis. It is a well-known saying of a German surgeon that he preferred seeing the case first and then examining the microscopic section after, before he would make a diagnosis, thereby implying what little confidence he placed in the latter.

It is not the Germans alone who are such devotees to the microscope. The Italians, French, and more especially the Austrians, are paying more and more attention to pathology and microscopy. The English and Americans are very slowly drifting into the same channel. The question in our mind is, if it is not more profitable to study more closely pathology, diagnosis and treatment. The rank and file of the American medical profession is in want of and needs methods of treatment which are successful. To his mind this is the useful part of the study of medicine. The other portions are luxuries, and he lets others delve in pathology and use microscopes. His work is to observe and note, and we must say that it is in this country that the best practical therapeutists are to be found. In this utilitarian age it is the practical that is sought in this country, the utilitarian being relegated to older lands and to those who are not driven by necessity to sally forth and earn their daily bread.

The question as viewed from another standpoint is also in op-

position to pathological and microscopic studies. From the patient's view-point the principal thing is to get well. Little recks he what cells or bacteria are concerned in the production of the disease from which he is suffering. What he wants and insists upon is to get well, and he asks for the medicines which will put him in that much-desired state. Patients take no interest whatever in pathology, and the very name is a bug-bear to them; a microscope is an infernal machine or one of the instruments of torture of the middle ages. In fact, they hold all these modern advances in horror, and want to see their pleasant old doctor, with words of encouragement, who is always provided with a prescription that will cure them.

Taking all these points into consideration, it is certainly no matter for wonder that pathology and its study is not the fad which our more advanced European confrères have made of it. We are not yet ready to take up the work as generally as it has been done on the Continent, although much good work is now being done at the Johns Hopkins, Cornell and other universities. We hope soon to be able to be ranked as on a par with our older friends who are workers in the field, and one thing which will never be lost sight of in this country will be the practical side of the subject. We will not say abolish pathology, but rather make it subservient to the practical needs of the practicing physician and available to him in his daily practice.

THE SCIENTIFIC STUDY OF THE CRIMINAL AND DEFECTIVE CLASSES.

It is some years since Lombroso, the eminent Italian, began his studies in criminology and endeavored to trace the impulse of the criminal to an anatomical peculiarity of the brain. Pauline Tarnowsky, the well-known Russian, also contributed to this subject, her principal contribution being a book relating to the anatomical peculiarities of the ears, eyes, etc., of a number of criminal women, including thieves, prostitutes, etc. The first hints thrown out did not fall on fallow ground, and the results so far obtained have been both interesting and satisfactory.

The Fifth International Congress of Criminal Anthropology, in its meeting at Amsterdam, September 9-14, 1901, passed the following resolution:

"The members of the Fifth International Congress of Crim-

inal Anthropology are in favor of the establishment of psychophysical laboratories for the practical application of physiological pscyhology to sociological and abnormal or pathological data, especially as found in institutions for the criminal, pauper and defective classes and in hospitals, and also as may be observed in schools and other institutions."

This Congress consists of distinguished specialists from all over Europe, and it is the highest authority. In our country up to date the following associations have passed the same resolution, but referred it to the Department of the Interior: Four National Medical Societies and Associations: The American Medical Association, the Association of American Medical Editors, American Medico-Psychological Associations and the Association for the Study and Cure of Inebriety; thirteen State Medical Societies: Connecticut, Indiana, Kansas, Kentucky, Louisiana, Minnesota, Mississippi Valley Medical Association, North Dakota, New Jersey, Pennsylvania, Texas and Wisconsin; three City Medical Societies: St. Louis, Chicago and Syracuse.

Now that such wide-spread interest has been excited in regard to criminal anthropology, we may expect that the combined studies and records of those who are preparing themselves to enter this field will be rich in results and furnish solutions to many of the intricate and complicated problems of modern sociology. An editorial in the *American Lawyer*, of New York, gives the best view yet published on the Scientific Study of the Criminal and Defective Classes. It is as follows:

"An effort is being made to establish a laboratory in the Department of the Interior at Washington for the practical application of physiological psychology to sociological and abnormal or pathological data, especially as found in institutions for the criminal, pauper and defective classes and in hospitals, and also as may observed in schools and other institutions. The defect in our present criminal law is, as we have before remarked, that it regards the crime and not the criminal. It presupposes that all mankind possess an equal power of resistance to anti-social tendencies. It practically lays down as an axiom that the child born of criminal parents, brought up in an environment of crime, is, until he has actually come within the jurisdiction of a magistrate's court, as equally desirable a citizen to all intents and purposes as he who has been reared in the atmosphere of the law-

abiding. Until an offense has been committed the law does not recognize the offender. For it the prospective criminal does not exist. Unfortunately there are some beings who are moral imbeciles. To confine our efforts to punishing crime when committed rather than to preventing its commission is like the proverbial locking of barn after stealing of horse. Nothing has been done by government as yet to treat the matter scientifically, and when it is considered that $600,000,000 is the annual tribute which, statisticians assure us, society pays to crime, and that the United States has the highest murder rate of any civilized country in the world, one is almost tempted to long for a return to the condition of things when one hundred and sixty offenses were punishable by death, though it be conceded that the death penalty is one of the slightest of deterrents to crime." The promoters of the measure have our best wishes. As put by the well-known writer: * * * "The study of man, to be of most utility, must be directed first to the causes of crime, pauperism, alcoholism and other forms of abnormality. To do this the individuals themselves must be studied. As the seeds of evil are usually sown in childhood and youth, it is here that all investigation should commence, for there is little hope of making the world better if we do not seek the causes of social evils at their beginnings."

A THOUGHT ON SUBSTITUTION.

A prominent physician recently remarked that when he commenced to practice he told his patients to have their prescriptions filled wherever it was most convenient.

He soon found, however, that this was a serious mistake on his part, for in many instances the expected results failed to materialize, the patients derived no improvement and left in disgust for another doctor.

After he had had a number of such experiences he felt called upon to investigate, and made the irritating discovery that these prescriptions had failed to do the work on account of having been improperly filled, the druggist either using a substitute for some preparation specified or cheap and inert ingredients, instead of fresh and reliable drugs.

Such is no doubt the experience of every practitioner, especially those in large cities where the patients may live several

miles from his office and are in the habit of patronizing some druggist near their residence.

Physicians must understand that their responsibility does not cease when the prescription is written, but that it is their duty not only to give minute instructions as to where it is to be filled, but also to examine, if possible, what the druggist has given the patient.

It is not to be supposed that even the majority of druggists are substitutors, but it is a well-established fact that this nefarious practice widely exists, and the unfortunate feature of the situation is that some men, who are highly regarded commercially and socially, are willing to sacrifice business principles and all sense of honor, to say nothing of tampering with human life, for such a pittance as the difference between the cost of the genuine preparation and a counterfeit, or of pure, fresh drugs and cheap, old, inert ones.

The physician's chief safeguard is in prescribing original packages as far as possible, since the risk of detection in such cases is much greater, and that act is in direct violation of the laws of many states which make it a criminal offense.

The General Assembly of the State of Tennessee recently passed an act to prevent the substitution of any drug in filling physicians' prescriptions in that state, making it a misdemeanor, and upon conviction the druggist shall be fined not less than $25 nor more than $100 for each and every offense.

Such a law is of great assistance in stopping substitution; but of course it is not always possible to secure the necessary evidence for conviction, and there is more or less uncertainty in appealing to the law. So that after all the physician's greatest protection relies upon the personal attention which he gives to this most important matter. X.

THE LATE PRESIDENT'S CASE.

We do not propose to discuss the surgical aspects of the case of former President McKinley's assassination. Nor do we intend to enter into the pyschological condition of the murderer. Least of all do we desire to emulate the example of many of our worthy cotemporaries located at or near the eastern seaboard. We are not inclined to criticize the work of the surgeons concerned in the case. In the first place it would be very bad form; and, further-

more, even those present at both operation and post-mortem examination have practically acknowledged that they could not satisfactorily discuss the matter or throw sufficient light on it to enable others to draw any conclusions of worth. We have received private advices from good sources that the reports and bulletins published by the press, as received from the Associated Press, were unreliable and gotten up in great part for stock-jobbing purposes. The Brahmins of the east have been wasting paper and printer's ink in a vain endeavor to explain the apparently sudden death of McKinley. Many surgeons of greater or less prominence and ability have paraded their views in the daily prints, and at this late day we are as much in the dark as ever.

This case, attended by medical men reported to be among the best in this country, has not cast that amount of credit upon the medical profession which we would have liked to see manifest. In fact, the majority of the laity is inclined to look upon all as much overrated men. As we heard one say, in language more forcible than elegant, the case "gave a black-eye" to surgery, which had been put up as one of the certainties of medicine. We were very sorry indeed to note the deplorable denouement of this affair, and still more so to read some of the lame excuses made for the result. As we stated at the outset, we do not propose to criticize men or methods, but merely to call attention to the fact that there is a greater occasion than ever to study seriously abdominal surgery, and more especially gun-shot wounds of the stomach and intestines. A few fortunate results in the hands of some are far from establishing principles, and it is only by a serious study of both successful and of nonsuccessful cases that some reliable conclusions will be drawn, in regard to operative measures and technique, which will be more apt to be followed by good results. In the meantime all surgeons should bend their strongest energies to a proper understanding of just such cases as the one which has culminated in the death of our chief executive.

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, March 5, 1901.

JOSEPH COLLINS, M.D., President.

Dr. Joseph Collins presented for diagnosis and discussion a boy of ten years who presented a complex of symptoms which could not easily be placed under any one designation. He was one of twelve children, seven of whom had in infancy marasmus or gastro-intestinal disorders. The present ailment had begun about nine months ago, at which time the boy had commenced to "hop." He complained of pain in the great toe of the left side, and also of pain in the precordial region. He had then been taken to the Mt. Sinai Hospital, and while there it had been noted that there was some stiffness or weakness in the lower limbs on walking. This impairment of motion had steadily increased, so that at the present time he was practically unable to walk more than a few steps. According to the history there had been early in the disease great difficulty in commencing the act of micturition. At present there were no symptoms referable to the bowel or bladder. He has a peculiar waddling gait, and when standing there is a typical flat foot. There is a peculiar knocking together of the thighs. The spasticity of the gait had been found, on closer examination, to be more apparent than real. There is a marked ankle clonus. There are no sensory disturbances. He gets up from the lying position as children do in the early stages of progressive muscular atrophy. These symptoms, the speaker said, seemed to point distinctly to a lesion in the spinal cord in the course of the pyramidal tracts.

Dr. B. Sachs said that he had been much interested in this boy at the time he had been in the hospital. The combination of the waddling gait, so characteristic of the dystrophy, with an increase in the reflexes, seemed to be especially unusual. When the boy was stripped it seemed to him very evident that he had progressive muscular dystrophy of the Landousi type. In addition to this he thought there was a subacute myelitis, possibly of traumatic origin. There could be no question that the calves are hypertrophied. This diagnosis had been arrived at only after

careful observation for a period of several weeks. The frequent falls which such children have would easily explain the occurrence of a subacute myelitis. The spasticity had been more marked nine weeks ago.

Dr. Graeme M. Hammon said that from the cursory examination he had made he felt inclined to accept the diagnosis given by Dr. Sachs.

Dr. William M. Leszynsky said that it seemed to him to be a very atypical case. He had seen quite a number of patients in whom there had been complete spasticity, and yet the ankle clonus had been very marked.

Dr. Joseph Fraenkel said that the most prominent symptoms were those of disease of the lateral and posterior columns. At first sight the gait was that of ataxic paraplegia. On the supposition that the myelitis was the later disease, one would expect less evidence of the second. The evidences of pseudo-hypertrophy were certainly quite trifling, while the disease of the cord was very marked. He inclined to the diagnosis of a subacute multiple sclerosis of a paraplegic type.

Dr. J. Arthur Booth said that there was certainly a greater deposit of soft tissue in the left than in the right calf. He accepted the diagnosis given by Dr. Sachs.

Dr. Collins thought it was safe to assume that the boy had a dystrophy, but not that there was a subacute myelitis. No one could say whether the changes in the spinal cord which accompany the dystrophies are not of such nature that double ankle clonus and double knee jerk might not develop. It was certainly a form of dystrophy which does not conform strictly to the description of any usually given. If there were an implication of the cord it was confined entirely to the course of pyramidal tracts. He would not be willing to admit that there are any changes in the spinal cord except secondary ones.

PROGRESSIVE MUSCULAR DYSTROPHIES, WITH A REPORT OF A POST-MORTEM EXAMINATION.

Drs. B. Sachs and Harlow Brooks presented this paper. The authors stated that it could not be denied that there was any sufficient distinction between the amyotrophies and the dystrophies. In former years much stress had been laid on the muscular structure. Hypertrophied fibres were found in abundance in dystrophies, whereas in the amyotrophies these fibres were not found.

But later it had been shown that the hypertrophied fibres were found in other diseases than dystrophies. It was also a question whether the gray matter of the cord was affected in the primary dystrophies. The case to be reported was one of progressive muscular dystrophy of fifteen years' duration, yet the structural changes, as demonstrated by the latest methods of staining, were very slight. The patient had been admitted to the Montefiore Home eleven years ago at the age of twelve years. Early in life the parents had noticed peculiar movements of the head and eyes. He had been in good health up to about the age of ten years, when he had fallen and broken his leg. At the age of twelve years, after an attack of typhoid fever, it had been noted that the calves were decidedly hypertrophied. The head was enlarged and exhibited certain movements. There was a marked atrophy of all the muscles of the shoulder girdle, arm and forearm. The deep spinal muscles were intensely atrophied. The thigh muscles were atrophied. The case became an extreme illustration of a progressive muscular disease of the pseudohypertrophic type. The lad's intelligence was fair. Dr. Brooks said that at the autopsy the organs were normal with the exception of an acute pneumonia and a slight myocarditis. There were no gross lesions of the brain or spinal cord. No lesion of the smooth voluntary muscular tissue could be found anywhere in the body. The psoas muscle showed extensive fibrosis. The muscles of the back all showed extensive fibroid replacement, and in places there was a replacement by yellow fat. The trapezii were very extensively invaded. The most extreme changes were in the muscles of the calves, where normal muscular tissue was lost. The autopsy had been done twenty-four hours after death, and at that time there had been no evidence of post-mortem decomposition. On microscopical examination the muscles showed extensive replacement, with areolar tissue of the adult type. In the calf occasional remnants of voluntary muscle were found. Most of the fibres of the psoas muscle were either larger or smaller than normal. The coarse striæ could usually be made out. The changes in the other voluntary muscles were of the same character, though varying in extent. In the occipital muscles the amount of connective tissue hyperplasia was less, but nuclear proliferation was prominent. Examination of various portions of the smooth muscles failed to

show degeneration or hyperplasia of the connective tissue forming its framework. The heart muscle showed much less connective tissue increase than had been expected from the gross examination. The cardiac muscle was in a very natural condition, there being no atrophy, no abnormal pigmentation or abnormal nuclear activity. The blood vessels in the various tissues showed uniformly an increase in the connective tissue. No evidences of new vessel formation were found. Numerous peripheral nerves were examined, but no appreciable degeneration of fibres was discovered. Only a few of the spinal ganglia had been properly prepared for examination, but these few showed a shrinkage of the ganglion cells similar to that produced by fixing agents. The irregular perilymphatic spaces were, however, found filled in with proliferating capsular cells, apparently indicating that this was not an artefact, but a distinct pathological process. Apparently the connective tissue of the ganglia had been increased. The connective tissue throughout the entire cord was found to be increased. The blood vessels of the cord were universally congested, but this was apparently of a hypostatic nature, due to the position of the patient before death. Nothing in the nature of a systemic degeneration of the fibres was found at any level. In the cervical region the ganglion cells in the anterior horn showed a slight nuclear eccentricity. The dendrites universally retained their power to respond to the stain. Occasionally the achromatic elements stained to a slight degree. Eccentricity of the nucleus was found more commonly in the dorsal cord than elsewhere. Lesions in the cells of the posterior horns were more infrequent than in the anterior horns. The most common lesion was a finely granular subdivision of the plaques, usually not involving the entire cytoplasm. A few of the lumbar cells showed an unusual amount of brown pigment collected about the nucleus. The chief lesions were: (1) Extensive atrophy, which affected apparently all of the voluntary skeletal muscles and was confined to these muscles; (2) the production of areolar connective tissue and adipose; (3) slight general perivascular hyperplasia; (4) moderate interstitial myocarditis; (5) extensive degenerative changes in a few of the posterior root ganglia, and (6) rare changes in the cytoplasm of the ganglion cells of the spinal cord. The complete absence of the changes in the smooth muscles showed that the disease process was strictly localized in the voluntary muscular system. The authors did not look upon the connective tissue in-

crease as an essential feature of the pathological process, but as an example of a universal function of this tissue to take the place of any tissue which had been removed. The perivascular connective tissue hyperplasia was very slight, and could not be considered as typical of the disease or as produced by it. Possibly the moderate myocarditis was associated with the connective tissue hyperplasia of the blood vessels. It did not seem to be in any way connected with the factors producing atrophy of the voluntary muscles. The changes in the posterior root ganglia seemed to be of great significance, though it was not clear that they bore any direct relation to the changes in the voluntary muscles. These degenerations seemed to be secondary in their nature, and dependent upon death or disease of certain portions of the neuron. A process similar to this occurred after amputation. There were, therefore, no evidences of tract disease. The cytoplasmic degeneration of the ganglion cells in the cord were rare, and might represent the early stage of post-mortem change. Dr. Sachs said that these findings did not indicate that the cause was to be found in the gray matter of the cord. The disease represents a primary affection of the muscular fibre. The occurence of stigmata of degeneration in so many cases of this dystrophy would lead one to think that these should be broadly classified under family affections. The question arose as to whether these muscular dystrophies were essentially progressive, and the statement was made that in every case the possibility of great improvement by systematic exercise should always be kept in mind in the early stage. Two illustrative cases were briefly reported which had been followed for many years.

Dr. C. L. Dana said that so far as the dystrophies were concerned, which were not strictly of the so-called pseudohypertropic type, but rather of the arm and leg type, it seemed to be a well-known fact that many of them cease to progress, and live for many years in comparative comfort. He had personal knowledge of two families in which there were six or seven persons, going through three degenerations, who were afflicted with the leg or arm type of dystrophy. Some had lived to old age with only an inability to use the upper arm or perhaps the thigh muscles. One of these cases had been seen at many clinics in this city when thirty-nine years of age. The atrophies had begun at the age of nineteen, and had reached their height at about the age of twenty-nine. His weight had been reduced to eighty-

eight pounds. A fairly hopeful prognosis could be given in this class of cases, especially when the atrophies do not begin very early in life. In his experience with pseudomuscular hypertrophy there had been only one case in which the disease had been really checked. This person was a lady of twenty-three in whom the trouble had begun at the age of eighteen. She had presented all the typical symptoms of pednohypertrophy of late development. He had put her upon systematic exercises, and as a result the disease had not only ceased to progress, but she had absolutely improved. In another case, which had been faithfully treated by exercise and massage for four years, there had been continued progress. Dr. Dana said he would like to have Dr. Brooks explain why there should be so much fibrosis in these cases. It might be that in the death of the muscle-fibre an irritant poison is formed, and that this gives rise to the increased proliferation. There was a striking difference clinically between a typical spinal atrophy and an ordinary dystrophy, and he believed these diseases were very different in their origin also. The hereditary cases were of a type which is quite distinct from that of the acquired forms.

Dr. A. Wiener said that about six years ago he had presented to this society a patient who was very much crippled in his muscular movements. In that case he had been so convinced that many muscular fibres were still intact that he had carefully trained him in exercises for six months. He had been again presented to the society at the end of that time, and the improvement had certainly been very marked; indeed, the day previous he had been able to ride forty miles on his bicycle. On the other hand, in the dystrophies occurring early in life he did not believe much could be gained by exercise.

Dr. Leszynsky exhibited photographs of two patients whom he had had under his care for a number of years with pseudohypertrophy of the lower extremities and progressive muscular atrophy of the upper extremities. Both had died of some intercurrent disease at the age of twenty-five. Before he had seen them both had received massage and careful training in physical exercise.

Dr. Hammond said that he had recently made a post-mortem examination upon a case of pseudohypertrophy with rather interesting findings. In the lumbar enlargement of the cord there had been found a distinct cavity extending for several inches. In the dorsal segment was a large gliomatous mass pressing upon

the cord. This was apparently a lesion independent of the disease in question. He was in a position to agree entirely with Dr. Wiener as to the beneficial effect of exercise. He had tried systematic exercise in those affected early in life, and had not found the slightest benefit from carefully conducted exercises of this kind carried on for a considerable time.

Dr. B. Onuf said that the muscles which have to do the most work were the ones most affected; the muscles which must bear the weight of the body were the first ones to become affected. It was because of this fact that he had been lead to try the effect of the opposite plan of treatment, *i. e.*, rest in bed. However, the result had been disappointing.

Dr. Collins said that the post-mortem examination referred to by Dr. Hammond had been on a patient that had been under his own observation for over two years. This man was twenty-four years of age at the time of his death, and the disease had existed for fourteen years. Careful investigation into the family history had shown no similar case. Up to his eleventh year he had been free from all disease. For eleven years he had been unable to walk, and for eight years had been bedridden. Up to a short time before death he had retained the ability to move his finger, though he could not move his arms, and his facial muscles continued to act well. It was a most typical case of progressive muscular atrophy. Death had resulted from a tuberculous infection. The brain reported on by Dr. Sachs had been from a boy under his observation for six or seven years. Assiduous attention to calisthenic exercises had made him worse in proportion to the assiduity, and that too although he had had an excellent calisthenic teacher. This had been Dr. Collin's experience in all other cases in which the disease had begun early in life. The changes described by Dr. Brooks as having taken place in the ganglion cells certainly opposed one's ideas of the relation of the neuron to disease. After five years' experience with the Nissl stain he felt in a position to assert positively that nuclear eccentricity means absolutely nothing.

Dr. Smith Ely Jelliffe said that he had heard nothing said by Dr. Brooks about the terminal end plate of the motor nerve.

Dr. Brooks replied that after attempting to study end-plates he had come to the conclusion that this could only be done with methylene blue during life, and that he had been unable to do. He could not tell Dr. Dana why the connective tissue should grow

up so much more in one place than in another. In the calves there had been an increase in volume, and in the pectoral muscles a decrease. It was not improbable that it was due to some inflammatory or toxemic condition in these particular muscles, or possibly that the muscles had been over-exercised. He agreed with Dr. Collins about the uncertainty of Nissl stain, and that the findings described by him as having been observed in the ganglion cells were negative.

Dr. Sachs closed the discussion. He admitted that the findings reported in the paper certainly did tend to shock one's confidence in the neuron theory as a whole.

Bronchial Affections in Gout and Obesity.—By Dr. J. M. Anders of Philadelphia (*Med. Soc. State of Pa.*). Although the pathogenesis of the abnormal conditions in the lungs in obesity is not clear, it can be assumed that the deposit of fat in the body plays a mechanical part. He describes the symptoms concurrent with overfatness, namely, pain in the subscapular and intrascapular muscles, more marked when the patients make an effort to maintain the erect posture. The physical signs vary, but as a rule tactile fremitus and percussion notes are enfeebled on account of the abnormal deposition of fat. There is a weakened vesicular murmur, although in rare instances the murmur may be exaggerated. Among the adventitious sounds are moist rales, although the author has also observed whistling sounds, the presence of mucus, however, predominating on auscultation. The author discussed asthma in obese subjects and the theories of its cardiac origin. Asthma in corpulency is due to the high position of the diaphragm in individuals who overfeed. There is good reason to believe that hepatic inadequacy may be a cause. He believes that the severe paroxysmal dyspnea in asthma can be helped by assuming the erect posture, as there is no characteristic sputum or vaso motor spasm in these conditions. The question of the relation of asthma to polysarcia is somewhat obscure, the author's conclusions being: (1) That asthma occurs in about five per cent. of the cases of obesity; (2) that it only occurs in extreme polysarcia; (3) that there is present a gouty state or history in most cases in which true asthma is secondary to the obesity; and (4) that about one-half of the cases are curable by overcoming the causative condition.—*Phil. Med. Jour.*

BOOK REVIEWS.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M D. Vol. III September, 1901. Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood Vessels; Dermatology and Syphilis; Diseases of the Nervous System; Obstetrics. 8vo., pp. 428. With 16 Illustrations. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, per annum, in four cloth-bound volumes, $10.00.

We are once more greeted by a number of this valuable and progressive publication, and the subject matter is of unusual interest. This volume includes an interesting narrative of the practical advances made in diseases of the thorax, dermatology, syphilis, diseases of the nervous system, and obstetrics. This volume will prove of the highest value to the general practitioner in view of the fact that so many notable advances have been made during the past year in the very subjects with which it deals. Dr. William Ewart presents the most recent views on pneumonia, phthisis and other diseases of the respiratory tract. The review is a most thorough one and eminently practical. The same may be said of the therapeutic advances in the treatment of pneumonia and phthisis. The surgical treatment of affections of the lungs and of the pleura are now among the recognized procedures and receive due consideration. Balneation in diseases of the heart and blood vessels, by means of medicated baths and otherwise, is fully discussed.

Dermatology is well considered by Dr. William Gottheil. The various items which are considered are well selected and reflect great credit upon the editor's work. The article is thoroughly illustrated and there is no criticism to be made beyond the quoting of so many foreign medical journals at the sacrifice of a good many American. But it may be argued that so many good things are published both in dermatology and syphilology that it is really a credit to Dr. Gottheil to have made such good and discriminating selections. Full discussions are given on phototherapy and the Finsen light treatment, as well as on blastomycetic dermatitis and inoculation tuberculosis.

Dr. William G. Spiller discusses and reviews the advances of the past year in diseases of the nervous system in a most interesting manner. He gives a very thorough discussion on tumors and abscesses of the brain, and follows this with obscure diseases of the nervous system whose explanations are not satisfactorily

given. Tabes and neuritis receive a large share of attention. A special description is given to each one of those diseases which have proven puzzling to those who have not specialized neurology. Dr. Richard C. Norris takes in hand the subject of obstetrics, and states in his introductory that the advances made in this particular branch during the past year are not many. However, he devotes quite some space to eclampsia, and also considers at some length the surgery of obstetrics, giving the latest views on symphysiotomy. He discusses as well the large number of recently reported cases in which lumbar anesthesia has been employed in obstetric practice. He does not appear to be particularly enthusiastic in recommending the procedure.

We are much pleased with this number of Progressive Medicine and regard it as among the best publications of critical reviews of the advancement in medicine and surgery during each year. It is destined to hold its high position with the medical profession for many years to come.

Holden's Anatomy. A Manual of the Dissection of the Human Body. Edited by JOHN LANGTON. Seventh Edition. Revised by A. HANSON, M.D. In Two Volumes. Vol. I: Scalp; Face; Orbit; Neck; Thorax; Upper Extremity. 153 Illustrations. Vol. II.: Abdomen; Lower Extremity; Brain; Eye; Organ of Hearing; Mammary Gland; Scrotum and Testes. 167 Illustrations. 12mo., pp. 843. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $1.50 each volume.

Holden's Anatomy will always be popular with medical students because it supplies one of their real wants. The work before us, now in its seventh edition, is much improved over former ones. Many new illustrations have been substituted for older and inferior ones. The editor has made it a point to bring it thoroughly up to all the latest advances in anatomy, and he has certainly succeeded well in his endeavor. Whilst the work is called an anatomy, it is far from being constructed on the formal plan of most of the works of this character. It is in reality a dissector and probably the best of its kind issued in English. Osteology is omitted because, the author states, a knowledge of this was presupposed to exist before dissection commenced. In other words, the dry bones of anatomy are made to give way to the more fascinating study of dissection.

So far as dissecting manuals is concerned, there can be no doubt that Holden's is the *facile princeps*. The directions given are practical and to the point; and whilst the descriptive portion is concise, it is clear and to the point, sufficiently so as to cover everything in anatomy. As will be noted from the general contents given in the title, those parts are taken up first which must be dissected first before the tissues get into such condition that a good demonstration is no longer possible on account of

drying, etc. The entire work is written in just such a systematic manner, and it is altogether a dissecting-room manual, and a most excellent one at that.

We could continue to call attention to the numerous good points of this work, but this hardly seems necessary, as it has established for itself a reputation which has carried it through seven large editions. One of the advantages which we note in this last edition is that measurements are given in the metric equivalents to the English measurements, thus greatly facilitating a better acquaintance with the figures given by Continental writters. We are also pleased to note the introduction of figures of some of the dissections made by the editor, who is a practical anatomist and teacher of this branch.

The two volumes are well gotten up by the publishers, and it is a great advantage to have the work thus divided, as one bulky volume is not as convenient to take to the dissecting room. The work in its present form is not only good and convenient, but one which we will not hesitate to recommend to medical students, as well as to practitioners, who will find it quite useful to brush up on when rusty on anatomical points.

Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-Book Specially adapted for Students of Medicine, Pharmacy, and Dentistry. By W. SIMON, Ph.D., M.D. Seventh Edition; thoroughly Revised. 8vo., pp. 613. With Sixty-six Illustrations, One Colored Spectra Plate, and Eight Colored Plates, Representing Sixty-four Chemical Reactions. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, $3.00 net.

This is a really modern work on chemistry, which is written in such a manner that it will not prove a bugbear to medical students. In fact, it is so constructed that it is interesting, and in conjunction with a competent teacher cannot fail of making good chemical students, who will later on take up the study for the sake of studying the wide field it opens. We have been particularly attracted by this volume on account of several features which are not usually found in elementary books on chemistry. To begin with, the author gives tables of reactions and colored plates which represent them, a most valuable aid, and far superior to mere names of colors. The objective method of teaching will always remain superior to the purely didactic, and this manner is followed in the present work.

The object of the book before us is not to make expert chemists, but to place those who might desire to be such on the right road to acquire the elementary and primary principles which may lead to a broader comprehension of the subject. After dealing with chemical physics, the preliminaries, as it were, general considerations on the laws of chemical construction, atomic and

molecular weights and the elements, are taken up. Following this we are given the non-metals and their combinations. The author then introduces his reader to analytical chemistry, and it is in this that the student will find his greatest help in laboratory work. Qualitative methods are chiefly considered in this, but a separate chapter is devoted to quantitative analysis, in which all the official methods of volumetric analysis are given. This will open up a new field to the aspiring student of chemistry, and one which he will find not only convenient, but very useful for future use.

The next part is devoted to a general consideration of organic chemistry, which has to day arrived to such dimensions that no one can claim to know more than a very small part of it. The carbon compounds are chiefly considered, as they include those bodies most often used in medicine, and the consideration of them in the book before us will familiarize medical students with those remedies they will be most often called upon to use. The last chapter is that which will prove of most value to the student after he has graduated. It deals with physiological chemistry and gives the most modern methods for chemical examination in making a diagnosis. As this work is especially intended for practical workers, a good number of simple experiments requiring but a small outfit has been given in order that the student may perfect himself in the laboratory methods of chemistry.

This book has pleased us very much, and we expect to soon have an opportunity to chronicle the appearance of its eighth edition. It should certainly meet favor in the eyes of both students and teachers of chemistry, more especially medical and pharmaceutical.

A Manual of Bacteriology. By HERBERT U. WILLIAMS, M.D. Second Edition, Revised and Enlarged. 12mo., pp. 290. With Eighty-nine Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $1.50 net.

This valuable little manual has certainly made its good influence felt and gained proportionate popularity, as evidenced by the appearance of a second edition. It is written in a clear, concise, practical style, and contains all the essentials connected with bacteriology that a student needs, and it is a book that will prove a valuable aid to any teacher. The physician will here find given in the smallest possible space those things which he must know, together with some of those things which he should know, and some others which he may learn if his inclinations lead him to pursue the subject further along this line of study. Anyone desirous of immediate information on bacteriology will find this a ready reference book and easy to consult, as a most thorough and copious index has been provided.

The book is divided into four parts, the first one of which deals

with bacteriological technique. The author has very much simplified this and yet made it thorough. The two concluding chapters of this part are particularly good, dealing as they do with the collecting of material and the systematic study of the species of bacteria. Part II. is particularly valuable, as the author takes into consideration, among other things, the morphology and physiology of bacteria, the products of their growth, bacteria of the normal human body, bacteria of disease, toxins, immunity, etc. In Part III. are considered the non-pathogenic bacteria, which are represented by yeasts and moulds.

Part IV., which is the largest, is devoted to pathogenic bacteria, and this deals with all those which are liable to occur in those diseases which occur in practice. It is a part which will largely repay study, and it is well illustrated. We would have been pleased to see more colored figures occur in this part, as they are much more demonstrative of the staining methods which are employed.

The book is well printed, and is a real credit to the publishers, who have issued it at a very moderate price.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Assisted by H. R. M. Landis, M.D. Vol. III. September, 1901. Diseases of the Thorax and Its Viscera, including the Heart, Lungs and Blood Vessels—Dermatology and Syphilis—Diseases of the Nervous System — Obstetrics. 8vo., pp. 428. With 16 Illustrations. [Philadelphia and New York: Lea Brothers & Co. 1900. Price per annum, in four cloth-bound volumes, $10.00.

Holden's Anatomy. A Manual of the Dissection of the Human Body. Edited by John Langton. Seventh Edition, Revised by A. Hewson, M.D. In Two Volumes. Volume I.: Scalp, Face, Orbit, Neck, Thorax, Upper Extremity. 153 Illustrations. Volume II.: Abdomen, Lower Extremity, Brain, Eye, Organ of Hearing, Mammary Gland, Scrotum and Testes. 167 Illustrations. 12mo., pp. 843. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $1.50 each volume.

Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-Book Specially

Adapted for Students of Medicine, Pharmacy and Dentistry. By W. Simon, Ph.D., M.D. Seventh Edition, Thoroughly Revised. 8vo., pp. 613. With Sixty-six Illustrations. One Colored Spectra Plate and Eight Colored Plates, Representing Sixty-four Chemical Reactions. [Philadelphia and New York: Lea Brothers & Co. 1901. Price, $3.00 net.

A Manual of Bacteriology. By Herbert U. Williams, M.D. Second Edition, Revised and Enlarged. 12mo., pp. 290. With Eighty-nine Illustrations. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $1.50 net.

Gallery of Pictures of Interest to Medical Men is a handsome album containing twelve colored pictures, nine by twelve inches in size. Each one is so printed that whatever advertising appears is on the back. On the front cover pages is an embossed medallion picture of J. Marion-Sims in colors. The entire publication is gotten up in the highest style of art, and is done in first-class style. This really handsome souvenir is issued by the Rio Chemical Co., 56 Thomas St., New York (formerly St. Louis). The pictures in this album are so arranged that each one may be removed and framed, and every one is certainly deserving of such treatment. We are certain that any member of the medical profession who sees this album will become the possessor of a copy, which he can be by addressing a request to the Rio Chemical Co. at their New York office.

MELANGE.

A Scientific Food Experiment in Chicago.—Children of wealthy parents are to be the subjects of food experiments by scientists in a splendidly equipped home known as the Chicago Hospital School for nervous and delicate children, at 5201 Drexel Avenue. Only the well to-do can afford to send their children to the school. The home can accommodate only fifteen children, and has more applications than it can fill at the present time. An annex is to be established soon, and the effect of food on the brain and body are to be studied under the direction of Dr. John M. Dodson, when he returns to Chicago from Boston, where he is understood to be conducting further researches in the subject. All conventional ideas of a school are to be disregarded at the hospital school. There will be no desks and nothing to suggest an institution will be allowed. The idea of working out such a problem originated with Dr. John M. Dodson, dean of Rush Medical College. The hospital school is affiliated with Rush College. —*Exchange.*

Nicholas Senn Prize Medal.—The committee on the Senn Medal beg leave to call attention to the following conditions governing the competition for this medal for 1902:

1. A gold medal of suitable design is to be conferred upon the member of the American Medical Association who shall present the best essay upon some surgical subject.

2. This medal will be known as the Nicholas Senn Prize Medal.

3. The award will be made under the following conditions: *a.* The name of the author of each competing essay shall be enclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device. The title of the successful essay and the motto or device is to be read at the meeting at which the award is made, and the corresponding envelope to be then and there opened and the name of the successful author announced. *b.* All successful essays become the property of the Association. *c.* The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction at a general meeting of the Association. *d.* The competition is to be confined to those who at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association. *e.* The competition for the medal will be closed three months before the next annual meeting of the American Medical Association, and no essays will be received after March 1, 1902.

Communications may be addressed to any member of the committee, consisting of the following: Dr. Herbert L. Burrell, 22 Newbury Street, Boston, Mass.; Dr. Edward Martin, 415 S. 15th Street, Philadelphia, Pa.; Dr. Charles H. Mayo, Rochester, Minn.

First Egyptian Congress of Medicine.—We have received a letter from Cairo, Egypt, containing the announcement of the First Egyptian Congress of Medicine, which will take place at Cairo, December 10 to 14, 1902. The Congress is under the patronage of his Highness the Khedive. The work of the Congress will be more especially devoted to the consideration of the peculiar diseases of Egypt, such as bilharzia, ankylostoma duodenalis, bilious fever, hepatic abscess, etc. Reports and papers on the epidemics which have regularly visited Egypt in late years will be presented. This Congress promises to be rich in impor-

tant results, and those desirous of obtaining further information may do so by addressing the secretary-general, Dr. Voronoff of Cairo.

We append the provisional program, which has been adopted.

Honorary Presidents of the Congress.—Dr. Abbate pacha, Dr. Pinching, Dr. Ruffer.

President of the Congress.—Dr. Ibrahim pacha Hassan.

Secretary-General of the Congress.—Dr. Voronoff.

Abscess of the Liver.—Drs. Cartoulis, Voronoff, Colloridi, Comanos pacha and Legrand.

Alcoholism and Its Progress in Egypt.—Dr. de Becker.

Ankylostoma Duodenalis.—Drs. Loos, Ruffer and Sandwith.

Bilharzia Hematobia.—Drs. Goebel, H. Milton, Colloridi and Trekakia.

Cardiopathy in Egypt.—Dr. de Semo.

Causes of Blindness in Egypt.—Dr. A. Osborne.

Dysentery.—Drs. Cartoulis, Hess bey, Crendiropoulo and Engel bey.

Epidemics in Egypt.—

Prophylaxis and Means of Combatting.—Dr. Bitter.

Eunuchism (Physiological Notes).—Dr. Abbate pacha.

Malarial Fevers.—Drs. Dreyer and Fornaris.

Filariasis in Egypt.—Dr. Madden.

Hasheesh Madness.—Dr. Warnock.

Granular Conjunctivitis in Egypt.—Drs. Lakah and Sameh bey.

Granular Conjunctivitis in Pupils of Schools.—Dr. Eloni bey.

Hernias in Egypt.—Dr. Látis.

Hydrocele in Egypt and Its Cure.—Dr. Colloridi.

Medicine in Egypt and Among the Arabs.—Dr. Eïd.

Medicine in Ethiopia.—Dr. N. Parissis.

Myxedema in Egypt.—Dr. Brossard.

So-Called Egyptian Ophthalmia.—Drs. Demetriades, Voilas and Sameh bey.

Purulent Ophthalmia.—Dr. Lakah.

Plague.—Dr. Gotschlich.

Tuberculosis in Egypt.—Drs. Ibrahim pacha Hassan, Eïd and Sandwith.

Various papers will also be presented by Drs. Ghanem bey, von Hebentantz, Meyer, Musso, Nasra bey, Symners, Smith, etc

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ORIGINAL COMMUNICATIONS.

A CASE OF ACTINOMYCOSIS CERVICIS—OPERATION; RECOVERY.

BY C. C. MORRIS, M.D., ST. LOUIS,
Chief Surgeon St. Louis Protestant Hospital.

In presenting this case I desire to introduce a preliminary review of the literature on this subject.

It is only a few years since that actinomycosis has been identified and recognized as a distinct disease. Bollinger, a European veterinarian, first described it in 1877 as occurring in cattle, and called it actinomycosis, on account of a fungus—the actinomyces. A uniform conception of the nature of the disease was then formed by the veterinarians of all lands, and the definition and name given by Bollinger was generally adopted.

Ponfick, in 1879, was the first to describe the disease in man, although it had been observed by Israel and described by him as chronic pyemia in 1878. Prior to Bollinger's report, different authorities expressed diverse opinions concerning it. The affection was also characterized as osteosarcoma, tuberculosis, fungoid, stomatitis, etc.

On the subject of the etiology of this disease, Crookshank, in his text-book on bacteriology, says: "The tongue is so often the seat of the disease that suspicion at once falls on food as the means by which the parasite is conveyed." The micro-organism

gains access to the system through wounds of the mucous membrane, or through carious teeth. It has been shown that the common occurrence of the disease at the time of the second dentition is probably due to the wounds produced in the alveolar mucous membrane by the shedding of teeth. As to the kind of food that furnishes the micro-organism, Jensen is of the opinion that the fungus may grow on grain, husks and straw of different cereals, but most abundantly on barley, which also is the most likely to wound the mucous membrane. He mentions an instance of a farm where nearly all the young stock, about thirty in number, had actinomycosis after feeding on mixed forage grown on a certain field. Two years afterwards the disease appeared in four animals after being fed on barley straw from the same field.

Johne's observations tend to corroborate this view, for twenty-two out of twenty-four cases, in which he found barley sticking in the tonsils of pigs, he found the beard thickly beset with a fungus, very similar to if not identical with the ray fungus.

Experience points to the belief that the disease is not readily communicated from animal to animal, and that where a large number are affected in the same herd that there is a common source of infection. However, if a suppurating actinomycotic tumor discharged its contents on food, which is afterwards eaten by an animal having a carious tooth, or a wounded mucous membrane of the mouth, or is taken into the alimentary canal, or inhaled into the bronchial tubes, infection would most likely take place. The upper and lower jaws and the tongue are the parts most frequently affected in cattle, although the disease may affect any part of the body.

In man the disease attacks the face and the neck in about fifty-five per cent. of the cases, the thorax and lungs twenty per cent., abdomen twenty per cent., and other parts five per cent. In France, where sixty-five cases have been reported, the cervico-facial region was affected in eighty-five per cent.

The most important feature of this disease is the diagnosis. On account of the characteristic appearance of the swelling, together with the symptoms complained of, it is a common mistake to make a diagnosis of osteomyelitis, or sarcoma. And since a positive diagnosis can only be made by means of the microscope, and from the fact that a considerable time must elapse be-

tween the beginning of the swelling and the formation of pus, it is not surprising that an early diagnosis is not more frequently made.

The only case of actinomycosis that has fallen under my observation was brought to me by Dr. English of Litchfield, Ill., on the 27th of April, 1900. The patient is a man, 33 years of age, a minister of the gospel. His family history was good. At the time that I first saw the patient he had a hard nodular swelling at the angle of the jaw of the left side. Upon palpation, two of these nodules were soft and slightly fluctuating. Upon questioning the patient I obtained the following history: About the first of March previous the last lower molar on the left side began to pain him, and he consulted a dentist, who, after a careful examination, thought that he could save it, and after treating the tooth several days he put in a temporary filling. This gave him relief for about two weeks. About the last of March he was called away from home for three or four days. While away his face began to pain him, and it also commenced to swell. He returned home and had the filling removed from the tooth, but this gave him no relief. This condition continued until April 9th. Although easy at times, he suffered much pain at intervals. Again he consulted the dentist, and had the tooth extracted, believing that there was ulceration at the root. This, however, gave no relief. About this time he noticed that he could not completely open his mouth, and that the pain had extended to his head and the spine. The family physician was called in; also a consultant. They applied a bichloride poultice, and gave anodynes for relief of pain. The condition, however, grew worse. The swelling increased, and the contraction of the masseter muscles was pronounced, so that when I first saw the case the patient was only able to take liquid food, not being able to masticate.

My opinion, upon first examining the patient, was that the tumor was the result of carious bone, or osteomyelitis. I lanced both soft nodules, from which escaped a small quantity of ordinary looking pus. After washing the wound it was dressed with an iodoform dry dressing, and I assured the patient that he would obtain relief. He was assigned a room in the hospital. When I visited him the next morning I was surprised to learn that he had slept very little on account of pain in the jaw. I prescribed phenacetine and quinine to be given every four hours.

This seem to afford him some relief. He remained in the hospital ten days, during which time the wound was dressed in an ordinary surgical manner. Phenacetine and quinine were continued, with an occasional dose of morphine for the relief of pain. At no time was there much pus in the wound; neither did it present characteristics different from ordinary pus. On May 7th the patient returned home, where Dr. English continued to dress the wound. For ten days it seemed to improve. Soon after this, however, the patient's neck began to swell, and multiple nodular abscesses developed, one after another. These were lanced by Dr. English to the number of seven or eight. Finally on the 6th of June the patient returned to the hospital. Upon examination of the case I found the condition to be as shown in the accompanying photograph (Fig. 18), which illustrates the appearance of the region affected better than I can describe it in language. At this time trismus was complete. The patient could only take liquids by drawing them into the mouth through the teeth. I noticed a decided difference in the character of the pus. It now contained yellowish-white granules, from the size of a pin point to that of the head. This gave me the clue to the diagnosis. I informed the patient that his condition was serious, and that I would let him know in a few days the results of investigation. I called Dr. Close in consultation, and told him my suspicions of actinomycosis. Upon microscopic examination of the pale yellow granules, the actinomyces, or ray-fungus, was discovered.

I cannot better describe the microscopical appearance than by quoting from "Crookshank's Text-Book of Bacteriology" (Edition 1899): "In spreading some of the discharge on a glass slip, the largest tufts of the fungus are found to be about the size of a pin head. They have a distinctly sulphur-yellow color by reflected light, but a yellowish or greenish-brown tint by transmitted light. Examined with an inch objective they have the appearance of more or less spheroidal masses of a pale greenish-yellow color. On removing the preparation from the microscope, and gently pressing down the cover glass with the finger, the grains flatten out like specks of tallow, and on again examining these with the same power, they are found to have fallen apart into a number of irregular and sometimes wedge-shaped fragments of a faintly brown color, affording a characteristic ap-

pearance. By preparing another specimen, and covering it with a cover glass, without completely flattening out the grains, the spherical, oblong and reniform masses, of which the tufts are

FIG. 18.—Before Operation.

composed, can be recognized with a $\frac{1}{6}$ inch objective, as rosettes of clubs. By examining the peripheral part of a rosette with a $\frac{1}{12}$ inch, and especially after pressing the grain into a thin layer, with or without the addition of a drop of glycerine, the characteristic clubs are most readily demonstrated. By carefully ex-

amining the form of the individual elements, as in the bovine fungus, every variation of rosettes is found, from single clubs with lateral offshoots, clubs divided at the extremity, palmate or fan-shaped groups, and banana-like bunches. In many cases the clubs are divided by transverse fission into two or three or more fragments. As a rule the clubs are irregular in shape, and of about equal size, while a few are conspicuous by their length.

"With suitable illumination many clubs are seen to taper off into slender filaments. By teasing the grains in a drop of water on a slide the clubs are gradually washed away, and a central core remains, which is composed entirely of a dense net-work of filaments. This can readily be observed by using a small diaphragm; and it will be found that the rosettes of clubs are now replaced by tangled masses, having some resemblance to miniature tufts of cotton wool. These filaments constitute the delicate network, which is seen in sections stained by the method of Gram. This can be readily verified by making a cover glass preparation of the grains, and staining by that method. The character of the fungus can readily be studied by proper illumination without staining. The clubs have a faintly greenish tint, and in form and arrangements are quite characteristic and easily recognizable. Permanent preparations may be made by mounting the fungus in glycerine."

In our examination of the condition of the patient, we were able in most of the details to verify the description given by Crookshank in the paragraph just quoted, except that, in some of the specimens examined, the clubs were absent. In cultivations it is a difficult matter to detect the genuine terminal clubs, such as are seen in actinomycotic products. In fact the clubbed extremities are supposed to exist only in very old fungi; for in sputa from patients suffering with actinomycosis of the lungs they are found in quantities side by side with clubless ones. Without a minute attention to technique, it is a difficult matter to make a pure culture of this fungus, for any contamination from other bacteria interferes materially with the growth of the actino-cladothrix, as most other bacteria begin to proliferate more rapidly than the ray-fungus, and penetrate into the grains themselves, thereby making a pure culture of the cladothrix impossible. Hence, since the ordinary methods of cultivation prove inefficient with this fungus, we may, notwithstanding, obtain a

pure culture by taking several large glass plates and covering one side with solidified meat-peptone-agar. Pick out from the pus a large number of grains, and distribute them over the plates, from one to two inches apart. Place these plates in an incubator, and examine them each day with a magnifying glass, by means of which it can be seen which grains remain pure and which are contaminated.

Pure cultures should be protected by removing them to another plate with a freshly prepared medium. By thus handling the colonies they have been cultivated through eleven generations, covering a period of seven months.

In this case now under consideration, however, we did not carry the cultivation beyond one generation of the pure culture.

It is not my purpose to go into details of preparing stained specimens, since the different methods are specified and described by Crookshank and others.

The treatment of actinomycosis is both medical and surgical; and whether the former is of as much importance as the latter, or whether both medical and surgical treatment should be employed, is a matter to be determined in each individual case.

In the case herewith described I employed both medical and surgical means, and I have reason to believe that either employed alone would have resulted in the death of the patient.

After the disease was diagnosed, an operation for removal of the growth was decided upon. The patient was prepared in the usual manner for a surgical operation, and on June 12th was chloroformed, and I removed the entire mass, which extended from the angle of the jaw to the clavicle, and internally to the sheath of the carotid artery. I also removed a portion of the inferior maxillary from the angle to the second molar tooth, and thoroughly curetted the bone. The soft parts were friable, and could easily be removed with the fingers and a spoon curette. The sterno-mastoid muscle was exposed, and upon examination with the fingers was found to be of ligneous hardness, as were likewise all the deeper structures of the neck that had not been removed. Hence I decided that the infection could not be completely removed by surgical means, and I desisted from further operative procedure, as the patient was not taking the anesthetic kindly, and his heart was acting badly. An iodoform dry dressing was applied and the patient was removed to his room, placed

in bed, and hot water bottles applied to his extremities. I informed his friends that the prognosis was unfavorable, and that he would probably live but a few days.

FIG. 19.—After Operation.

For the first twelve hours he was given stimulants, for his heart continued weak, and he had a subnormal temperature. In about forty-eight hours he had rallied, and was evidently better. He could again take liquid nourishment between his teeth, the trismus being as pronounced as before the operation. On the

third day I prescribed iodide of potassium, fifteen grains to be given in essence of pepsin, three times a day. This was continued for about one week, and the wound was washed with bichloride solution, one to two thousand, and dressed with iodoform powder and gauze.

The discharge of pus was very slight, and the wound seemed to be taking on healthy granulations. The iodide of potassium was well borne by the stomach. Consequently at the end of ten days I increased the dose to thirty grains, every four hours, or one hundred and eighty grains per day. At the end of the second week the trismus was slightly improved, and the wound was healthy and was filling out.

The patient left the hospital July 3d, and he then could separate his teeth about one-half inch. The wound had filled out with granulation tissue, and the hardened feeling of the muscles had materially decreased. As there had been no symptoms of iodism, and the patient's stomach was in good condition, I advised the continued use of the iodide of potassium, in thirty-grain doses, until the wound had entirely healed. Whether this was strictly adhered to, the patient can answer. At any rate, the wound completely healed in about four months after the operation. (See Fig. 19).

Some cases of actinomycosis are reported in which iodide of potassium was administered without benefit. In fact it is reported from France that in two-thirds of the cases of chronic actinomycosis of the face and neck the results of the iodide treatment are nil. In three-fourths of the recent cases recovery has been obtained by it, combined with surgical treatment, and in one-fourth by iodide treatment alone. My opinion is, that both surgical and iodide treatment should be applied in each case, and that the iodide should be given in large doses.

900 Garrison Avenue.

Accused of Smuggling Surgical Instruments.—Dr. T. Schwenkenstein, of Marion, Wis., is charged by the customs officials of this port with having smuggled in a number of surgical instruments, the total value of which is about $1,660. Dr. J. M. Sattler, of the same town, is also implicated.

RAREFYING OSTEITIS IN CHRONIC EMPYEMA OF THE ETHMOID AND SPHENOID SIMULATING ATROPHIC RHINITIS,*

BY EMMA E. MUSSON, M.D., PHILADELPHIA, PA.

The term atrophic rhinitis is rather an unfortunate one, as atrophy of the tissues of the nasal cavities may be due to various causes. It will probably be abandoned with the establishment of a classification of nasal diseases, based on better knowledge of the pathology and bacteriology of the nasal mucous membranes. I use the term as defined by Bosworth: "A form of catarrhal inflammation leading to a more or less complete destruction of the muciparous glands and follicles, together with a cirrhotic condition of the mucosa proper, the prominent symptoms of which are the formation and decomposition of crusts leading to a fetid odor."

Purulent infiltration of ethmoid cells gives rise to several entirely different forms of pathological processes; probably the most frequent is that termed intra- and extracellular polypoid degeneration of the mucous membrane, usually attended in advanced stages with extensive hypertrophy of the middle turbinate and the appearance of polypoid tumors arising from the middle meatus. The object of this paper, however, is to describe that pathological process which ends in the gradual absorption of the bone tissue that goes to make up the ethmoidal labyrinth and its covering, the middle or ethmoidal turbinate—a process of bone resorption the outcome of a rarefying osteitis. According to Hajek, "Rarefying osteitis is always the result of long-continued deep inflammation of the mucous membrane and the medullary spaces, whereby the cellular infiltration becomes sclerosed and through pressure on the blood vessels affects the nutrition of the periosteum in its relations to the bone. This is shown by the occurrence of Howship's lacunæ with the presence of numerous osteoclasts through which the osseous trabeculæ become more and more thin, until they are partially or entirely destroyed and become canceliated tissue. The result is a disappearance or an excessive thinning of the osseous trabeculæ, but at no time is this a carious process, though pressure on mucous membrane covering bone is followed by a crackling of the bone beneath." This process of resorption may go to the extent of complete dis-

*Read before the Philadelphia County Medical Society, Sept. 11, 1901.

appearance of the middle turbinate and the ethmoidal cells, thus entirely uncovering the anterior wall of the sphenoidal sinus, as in a case I have now under observation.

Grünwald is of the opinion that atrophic rhinitis is always the result of a purulent involvement of the accessory sinuses, and that all cases of atrophic rhinitis will be found to have their origin in involvement of these sinuses. This is contradicted by some writers, who contend that when pus is found in the accessory sinuses in the progress of an atrophic rhinitis it is always a secondary infection or an extension of the diseased process from the nasal mucous membrane. My own clinical experience leads me to believe that we have to deal with two different affections: one a chronic empyema of the accessory sinuses leading to a rarefying osteitis, and thus resorption of bone; the other an atrophic rhinitis as described by Bosworth. Differential diagnosis is at times exceedingly difficult, and may not be reached until the patient has been under observation for some time, and yet on the ability to make this diagnosis lies the prognosis of the disease. You can hold out hopes of a permanent though possibly a long-delayed cure in that empyema of the accessory sinuses, while in atrophic rhinitis you can but alleviate the more distressing features of the case.

Recognition of the involvement of the accessory sinuses is even more difficult and more important in children, for the majority of these cases arise during an attack of diphtheria, scarlet fever, or other infectious diseases of childhood, are diagnosed as purulent rhinitis, and when odor arises as atrophic rhinitis; the whole treatment is referred to the nasal mucous membrane alone, and the primary source of the disease, the accessory sinuses, is entirely overlooked. Harke, in a series of thirty autopsies on children dying from croup, diphtheria, measles, whooping-cough, scarlatina and chicken-pox, found suppuration of one or more of the accessory cavities in every case. In thirty-seven autopsies on adults he found empyema of the sinuses in thirty-one cases of those dying from typhoid fever, pneumonia, influenza, erysipelas, and meningitis; certainly a larger proportion of sinus complications than we have any reason to suspect are diagnosed during the progress of the disease.

As this paper is largely founded on personal experience, the following cases are reported:

CASE I.—Miss W., aged seventeen years, came to me in December, 1896, with a history of a purulent, crusting discharge from her right nostril, dating back to an attack of diphtheria at four years of age; for this condition she had been under treatment since 1891, and under the care of a specialist since 1894. By this latter she was treated for atrophic rhinitis and deviated septum. Examination showed a markedly deviated septum to the left, with marked atresia of this nostril and a cavernous appearance of the right one; the mucous membrane of the whole cavity was more or less covered with crusts, on removal of which pus was seen oozing from beneath the middle turbinate and between the septum high up; posterior examination showed pus in the middle meatus and on the walls of the nasopharynx. The inferior turbinate body has become almost entirely absorbed, and the middle turbinate is a mere remnant of itself. In probing the middle meatus small polypoid masses and carious bone were detected in the region of the anterior ethmoid cells. The sense of smell is unaffected and the transillumination test is negative.

Diagnosis, at this time, was made of abscess of the ethmoidal cells, with possible involvement of the sphenoid sinus. Treatment was entirely directed to the ethmoid cells, which were opened up and curetted, the middle turbinate being left intact. Treatment was continued at intervals from this time, January, 1897, to February, 1899—a period of a little over two years. At the end of that time there was a complete cessation of the crusting and of the purulent discharge. This winter the patient had acute ethmoidal and sphenoidal abscess of the same side and of an aggravated type, following upon la grippe; under treatment complete recovery took place in two weeks. Two years seems a long period of treatment; this, however, was undertaken some years ago, and methods of treatment of accessory sinuses have greatly improved. This young girl was so extraordinarily sensitive and morbidly depressed over her condition that the prospect of relief from the discharge and the odor was to her sufficient inducement to undergo prolonged treatment.

The next case was under treatment by myself for atrophic rhinitis; the case was dismissed, but returning again this winter a diagnosis of purulent involvement of the accessory sinuses of the right nares was made.

CASE II.—Mr. R., forty years of age, was distressed by

ozena, greenish crusts, and loss of the sense of smell. All the other features of a supposed rhinitis, nasopharyngitis, pharyngitis, and tracheitis were fully demonstrated. The septum was deviated to the left, and the left nostril, except at its posterior choana, was nearly normal. Repeated examination revealed carious bone in the region of the anterior ethmoid cells, while syringing dislodged pus from these and from the sphenoid sinus. The surgical treatment was directed toward improving the drainage of these sinuses and of opening and treating the antrum, which remained dark under transillumination. Crusting and odor have almost entirely ceased, the discharge being light yellow, small in amount.

Case III.—Miss M., aged thirty-seven years, came to me in October of this year, with a history of "catarrh of head" since childhood. Has been under treatment for atrophic rhinitis, and has the four typical symptoms of it—odor, total loss of sense of smell, profuse crusting, and shrinkage of the turbinates. In addition the skull is brachycephalic, and the nose, decidedly tipped upward, shows wide-open nostrils. The nasopharynx and pharynx are dry and glazed, giving the appearance of pharyngitis sicca; the disease has also involved the trachea. The patient, however, comes for the relief of a constantly persistent dull headache, confined mainly to the frontal region and back of the right eye. Outside of the conditions mentioned, the most striking features on nasal examination were the almost complete atrophy of the turbinates, thereby leaving exposed to view the anterior walls of the sphenoid, the openings of which were readily distinguished, as pus was welling out of them, and the excessively hypertrophied bulla ethmoidalis a large anterior ethmoidal cell.

Attempts to pass a probe up into the infundibulum into the frontal sinus was rendered impossible by the enormous bulla ethmoidalis. In probing the right bulla for a possible pus cavity the probe easily passed through the mucous-membrane covering, and detected a large area of roughened bone; this was removed by drill, and resulted in a marked diminution in the size of the bulla. Carious bone was also detected in ethmoidal cells. At no time after operation was there any apparent auto-infection from the pus present. This is according to Hajek's experience in removal of the middle turbinate in abscess of the frontal sinus.

Examination of the fundus of the right eye showed marked

congestion of the retinal vessels. After the second treatment there was no further recurrence of the headaches, which were undoubtedly due to retention of pus in the sphenoidal sinuses, while the involvement of the retina was the result of the close relation of the optic nerve to the roof of the sphenoid sinus; the average thickness of bone lying between the two is 4 to 6 mm.; it is, however, very variable, and upon this may depend the involvement or non-involvement of the optic nerve in inflammatory conditions of the sphenoid sinus. This patient has learned to wash out her own sphenoidal cavities, and with the use of a mild boric and salt solution and the constant wearing of Gottstein's plug, the latter catching any pus that may find its way from the middle meatus, and counteracting the effect of the greatly shrunken tissues, is practically free from my care.

CASE IV. is of peculiar interest as occurring in a child of ten years old, and with no history of having suffered from any of the acute infectious diseases of childhood. She has lived in Paris for the last five years, and two years ago was taken to a physician there for nasal catarrh, but was not treated. The catarrhal trouble grew steadily worse, and every morning large masses of thick secretion were removed from the nose and throat. Odor developed, and was marked, but at no time has there been loss of sense of smell. On examination the inferior turbinates are normal in appearance, but the middle turbinates are markedly shrunken and covered with a muco-purulent secretion, which oozes from the middle meatus and from between the mid-turbinate body and the septum. On posterior rhinoscopic examination pus is seen in the vault and on the posterior wall of the nasopharynx, a fact that should always call the physician's attention to the possibility of purulent involvement of the sphenoid sinus or posterior ethnoid cells. More characteristic still of this involvement, and seen in this case, is muco-purulent secretion lodged between the middle turbinate and the roof of the posterior nares—the superior meatus. Ordinary methods of syringing fail to remove the secretion, and it is only on syringing through a long fine silver canula passed into the sphenoid sinus that these masses are dislodged. Such a line of treatment in so young a child is immensely difficult, and is only pursued conscientiously with the thought of the child's future, where ozena means to a certain extent social ostracism.

Case V.—A child aged thirteen years has, in addition to atrophy of the inferior turbinate, a marked bulging of the middle turbinate, rendering it difficult to pass a probe between it and the septum, and yet below this hypertrophied turbinate is clearly seen the pars sphenoidalis, the result of atrophy of the surrounding tissues, a condition illustrating the co-existence of a rarefying osteitis and a hypertrophic bone process. The apposition of these two processes of increased bone production and bone absorption has been demonstrated by Hajek in the ethmoid cells and the covering, the ethmoidal or middle turbinate bone.

The differential diagnosis between atrophic rhinitis and suppuration of the accessory sinuses, complicated with rarefying osteitis, is a difficult one and one not to be made on the first examinataion of the case. In atrophic rhinitis the process of resorption of the tissues is a more extensive and a more generalized one, and the mucous membrane is thinned out, closely outlining the anatomical conformation of the nasal cavities. It is usually of a smooth and dirty gray appearance, while in purulent sinusitis the mucous membrane has a congested and granular surface, and even in some cases with a tendency to local hypertrophies, as seen in the presence of small nasal polypi. On delicate and patient use of a probe carious bone is usually detected in purulent sinusitis involving the ethmoid cells, and is due to the breaking down of the thin, delicate walls, while in atrophic rhinitis the probe everywhere discovers only smooth mucous membrane. In the latter condition the crusting is also more generalized, while in the former it is seen oozing from the middle and superior meatus and on the septum adjoining. The masses of secretion accumulating on the floor of the inferior meatus and on the inferior turbinate is accounted for by the fact that the secretion flows from the middle meatus over the shed-like turbinate, and from thence on to the floor of the nose. This can be demonstrated by introducing a Gottstein plug—a plug of cotton 2½ inches in length and ½ inch in diameter, sufficient to fill up the floor of the nose and cover over the inferior turbinate. On removal twenty-four hours afterward, the upper surface of the plug will be covered by a muco-purulent secretion, while the floor of the nose and the inferior turbinate will be found free of it; the origin of the discharge will then be seen to be from the middle or superior meatus; on removing this and syringing in the direction of the outlets of

the sinuses, by means of a fine flexible silver canula, a pale creamy pus, not yet exposed to atmospheric changes, will be washed down.

Destruction of the terminal olfactory nerve filaments is always the final outcome of atrophic rhinitis, the absence of the sense of smell being its most marked feature. It may or may not occur in sinus disease, though where ozena is marked and of long duration the sense of smell is usually gone. Therefore the retention of the sense of smell is usually a point in favor of diagnosis of ethmoidal disease. Ozena is also present in both affections; in sinus abscess it is the result of the retention and decomposition of pus; in atrophic rhinitis possibly from the presence of the bacillus of Lowenberg.

In atrophic rhinitis the most thorough probing does not reveal exposed or carious bone, while in ethmoidal diseases delicate probing in the direction of oozing pus will usually detect uncovered or roughened bone surface. This bone necrosis is, according to Hajek, the result of the pressure of retained pus within the ethmoid cells, which burrows through the mucous membrane and the thin bony trabeculæ of the ethmoid, breaks down their walls, opens up communication between the cells, and results in the formation of fistulous openings. He denies that ulceration of the mucous membrane covering of the ethmoid cells can take place; I am, however, quite confident that my probe has detected the middle turbinate denuded of mucous membrane, the result of an eroding process that has started in the mucous membrane covering the turbinate bone, and not from a fistulous process starting from within the ethmoid cells themselves.

In the treatment of these cases we have another point of diagnosis: in atrophic rhinitis the mucous membrane does not tolerate surgical procedures, while in purulent sinusitis, removal of carious bone and the opening up and draining of the ethmoid and sphenoid lessens the amount of purulent secretion, improves the ozena, and is not followed by that inflammatory reaction that we would expect upon exposing fresh surfaces to the influence of decomposed secretions.

Abscess of the sphenoid is easier of diagnosis if it is possible to catheterize the sinus, and this is readily done if the middle turbinate has disappeared through the absorption process of rarefying osteitis. The opening in the sphenoid is found by

passing a probe along a line reaching from anterior spinal process to the middle of convex surface of the middle turbinate, when, by delieatc maneuvering, the tip of the probe is felt to slip into a cavity. Having carried the probe back to the posterior wall of the sphenoid, the length of the probe from the anterior spinal process to the supposed posterior sphenoidal wall is measured; if this measures three inches in children or three and a quarter or over in the adult, the probability is that you have entered the sphenoidal sinus. To detect the presence of pus, a fine silver canula is introduced and the cavity is syringed out; if there is pus in the sphenoid we will have the appearance of a pale yellow purulent discharge. This method of diagnosis is also used in distinguishing the origin of a post-nasal discharge, whether it originates in the sphenoidal sinus or is the result of post-nasal catarrh.

Abscess of the frontal and maxillary sinuses is usually given as the primary cause of the infection of the ethmoidal cells; my cases have been particularly free from involvement of these cavities; it is possible that on account of the structure of the ethmoidal labyrinth that resolution of inflammatory products has not taken place pari passu with that of the frontal and maxillary sinuses. I am, however, inclined to believe that primary invasion of the ethmoid is just as frequent as that of the frontal bone and antral cavities, but that it is much more apt to end in a chronic process.

More German Science!—A prominent news dispatch states that the doctors discovered last year that the main purpose in life of the mosquito is to inoculate its victims with malaria, and now Dr. Löffler finds that a little malarial poison may be a good thing for a man to have in his system to banish worse diseases, including cancer. Don't smile at Löffler! He is doing the best he can for the advancement of science, and cancer is a very, very baffling disorder. The plan of fighting a poison with poison is not new in medicine. Doctors once, as a forlorn hope, had a rattlesnake bite a leper, but no good came of it.

TREATMENT OF INFANTILE ECZEMA.

BY J. W. P. SMITHWICK, M.D., LAGRANGE, N. C.

As eczema occurs in infants it usually affects the hands and face, but may extend and involve other and even all portions of the cutaneous surface. The disease generally assumes the crustaceous or pustulocrustaceous type, and may extend no further than the integument covering the scalp and face. There is most usually some digestive disturbance associated with the trouble, upon which it is dependent in some respect, and which must be corrected before we can hope to effect a permanent cure, or even to give much relief. The stools are greenish and frothy, but small doses of calomel and sodium bicarbonate will readily correct this, as a rule.

Having corrected the digestive disturbances, we must turn our attention to that part of the trouble that affects the mental activities of parents and friends, for they are always very uneasy about the little sufferer.

To begin with, and to be remembered all through the treatment, we must carefully eschew all applications that are in the least irritating. Strong soaps are, therefore, inadmissible for cleansing purposes. I have found it best, when the crusts require softening before removal, to apply some bland oil, as olive oil, for that purpose. If itching be present to such an extent as to worry the little one, something must be done to allay it and afford comfort.

To be brief, an outline of the treatment as pursued by myself, and which has given me the most positive results, will not be out of order. It is as follows: When first seen, if the crusts need removing, I advise applications of olive oil, one or more, as the case demands, then the parts are bathed twice a day, night and morning, with warm water and dermapurine soap. This effects a thorough cleansing, and does not produce the slightest irritation; on the contrary, it seems to be soothing to the irritated surface, and to allay the intense itching that accompanies some of the cases. The surface then is kept soaked in dermapurine liquid by means of wet pledgets of gauze laid thereon and bandaged, if the condition of the parts will allow it; if not, the medicine is diluted with equal parts of pure water. As the case improves, the applications are made with less frequency, but until

it is about well I advise a free application on retiring that is to remain on all night. By this means I get the full benefit of the applications, which is of great importance, especially in the beginning of the treatment. Some cases will need tonic and other treatment, but every case is a law unto itself, and the condition of the general health and condition will suggest the special treatment that is necessary to secure the quickest cure. All abnormal and distorted functions of the different organs of the body should be overcome and corrected, and the system put in as good condition as is possible.

A report of the following cases that I have recently treated will not be uninteresting:

Mary B., aged ten months, was brought to me by her mother. Family history was good, neither her parents nor grandparents having suffered from any special malady. The infant's face and head was entirely covered with crusts of eczema, under which there was considerable amounts of pus formation. Mother informed me that two physicians had tried to effect a cure without success, and it was now three months since the trouble first made its appearance, and was causing her a great deal of alarm, as she feared that it was incurable. I advised applications of olive oil until the crusts came easily, and directed her to wash the parts in warm water twice daily, using dermapurine soap, afterwards making applications of dermapurine liquid, diluted with an equal part of pure water, as I thought a stronger solution would be irritating, and desired to be on the safe side, more on account of the mother than anything else. Asked her to report at the end of a week. In this case there was a condition of the bowels which was closely allied to the common summer diarrhea of babies that are bottle fed. The evacuations were green in color and very offensive. For this condition I prescribed a powder containing one grain of subnitrate of bismuth, one grain of saccharated pepsin, and one-tenth grain of the mild chloride of mercury. One of these powders was administered every sixth hour, until the evacuations presented a natural color and odor, and then the mild chloride of mercury was left off, but the other constituents continued for some time. When I next saw the baby, improvement was decided—more than I could have expected in that length of time. The medicines were continued as before, with the exception that dermapurine liquid was directed in full strength. At the end of

two weeks more the baby was entirely well, the skin appearing as healthy in the portions that were affected as in any other part of the body. There has been no return of the trouble.

This was a case of a little boy, two years of age. He had been affected with eczema of the scalp more than a year when I first saw him. It was mostly of the crustaceous variety, accompanied with an excessive amount of itching, so that the little fellow was in constant suffering, more or less, all the while. There was no morbid condition of any of the organs present that I could determine. I ordered applications of olive oil, one a day, until the crusts were sufficiently softened to come off easily, and directed that the parts be bathed in warm water, using dermapurine soap, after which dermapurine in full strength to be applied locally several times daily. I also directed that absorbent cotton which was previously soaked in dermapurine be applied to the scalp on retiring, same to be held in position by bandage until morning, when it was to be removed, and the parts again bathed in warm water, using the soap indicated. I also prescribed a simple tonic to aid and improve appetite and digestion, and I was pleased to note that improvement was not long in manifesting itself. After two weeks' treatment improvement was rapid, so that by the end of a month a complete cure was effected, as was shown by no return of the disease.

In this case a baby of eighteen months of age had eczema of the weeping variety; affected the buttocks and gluteal regions. It had manifested itself about three months before I saw the case, and had been treated by various applications, all of which, however, seemed to be of little or no benefit. As usual, I advised the use of warm water baths with dermapurine soap, and applications thereafter of dermapurine solution in full strength. This case did nicely under the treatment, which allayed all itching and irritation in an incredibly short time. It was entirely well in two weeks' time from the time treatment was begun with dermapurine, and has remained so, which means that the cure was perfect.

In my experience with dermapurine I have found nothing that equals it in the treatment of all forms of eczema, and especially when they occur in the period of infancy.—*Southern Medical Journal.*

THE ETIOLOGY AND SYMPTOMATOLOGY OF CONSTIPATION, INCLUDING THE DIFFERENTIAL DIAGNOSIS BETWEEN ATONIC AND SPASTIC CONSTIPATION.*

BY BOARDMAN REED, M.D., PHILADELPHIA, PA.

Constipation may be best defined as that condition in which there is an imperfect emptying of the bowels. It may result from many different diseases. Though only a symptom of some pathologic state, either in the innervation or muscular apparatus of the intestines, or of disease elsewhere in the body, it is exceedingly prevalent in civilized communities, and, in its chronic form, is almost never cured by the administration of medicines alone nor by any directly opening measures, whether in the form of laxative drugs, per os or rectum, or colon douches, or even the usual routine massage.

Etiology.—To enumerate all the diseases which seem often to stand in a causal relation to constipation would almost exhaust the list of important known maladies. Prominent among those which nearly always produce constipation (and some of them complete obstruction) are meningitis, brain tumors, and many other cerebral and spinal affections, lead poisoning, volvulus, invagination of the intestines, hernia, peritonitis, appendicitis, abdominal and pelvic tumors, etc. It is also a frequent result of blood impoverishment and of most depressing diseases of the nervous system, inflammation of the stomach or upper intestines, ulcer or tumor of the same, and stricture of the bowel; also of abnormalities in the gastric secretion, especially hyperchlorhydria, many diseases of the liver and pancreas, and particularly of the downward displacements (ptoses) of the abdominal viscera, as well as backward displacement of the uterus and other diseases of the pelvic organs. Prolapse of the right kidney (movable kidney), which is exceedingly common in women, is often a factor in the production of constipation by obstructing at times the lumen of the duodenum, and the agglutination folds of intestine to each other or to neighboring structures may seriously impede the onward propulsion of the feces.

The most prolific causes of chronic habitual constipation, and those most amenable to non-surgical treatment, are to be found

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in either one of two opposite conditions involving both the nervous and the muscular apparatus of the gastro-intestinal tract, and requiring quite different methods of treatment. These are atony and spasm. Atony of the stomach walls, whether amounting to dilatation or only to motor insufficiency with delayed emptying, results generally in a deranged intestinal peristalsis, showing itself usually at first in the form of constipation. Atony in any part of the intestine must manifestly produce a like result.

A cramp or spastic state of the pylorus or of the muscles of the intestines, leading to irregular local tonic contractions of the circular fibres, is a common and often unrecognized cause of constipation. In hysteria and in certain forms of neurasthenia such localized spasms are perhaps almost as frequently responsible for difficult defecation as muscular atony, and much more frequently than any other single cause. It is probable, also, that the deranged digestion, both gastric and intestinal, which so often accompanies neurasthenia by producing fermentation and abnormally acid conditions in the alimentary canal, conduces powerfully to the spasmodic action; and it is likely that portions of the bowel, the mucous membrane of which is in a state of chronic catarrhal inflammation, have an increased tendency to spastic contractions.

Authorities differ widely as to the relative importance of various factors in the causation of both atonic and spastic constipation. Glénard considered displacements of the stomach and intestines as chiefly responsible, while Emminghaus traces habitual constipation to degenerative changes in the splanchnics, and Dunin thinks it attributable mainly to central functional anomalies in the nervous system. Boas* finds it difficult either to deny or confirm these theories, but points out that in any fully developed case of neurasthenia with constipation there may be found a vicious circle, and he aptly illustrates his idea by describing as follows a supposed case such as we all often see:

"A previously healthy woman begins to suffer with constipation and requires aperients. Gradually these become inefficient; defecation is more and more difficult and imperfect. At the same time there is taken a decreased amount of nourishment, either in consequence of a misuse of purgatives or as a therapeutic

*Diagnostik u. Therapie der Darmkrankheiten. Leipzig, 1899.

measure ('easily digestible food') or as a result of a bad general condition, or from anemia or gastric derangements, *e.g.*, atony. Naturally, then, there follow emaciation, dropping of the abdominal viscera, and, with these, increase of the constipation; and finally, as a capstone to all these symptoms, the picture of well-marked neurasthenia. Here, as every experienced physician must concede, the enteroptosis is not the cause but the consequence of the habitual constipation, and the same holds good also for the neurasthenia. But, on the other hand, the loss of flesh from whatever cause can lead to the development of visceral displacements and so produce constipation, or, perhaps more correctly, favor its development, as also, in like manner, genuine neurasthenia (according to Dunin's view) may prove the basis for the development often of even very stubborn forms of constipation."

An insufficient amount of food or drink, a too bland diet lacking in refuse matters, or a too predominately nitrogenous diet, sedentary occupations, deficient exercise, and a want of regularity in going to stool, are further important causes of chronic atonic constipation.

Symptomatology.—It has been denied that auto-intoxication can be caused by dry feces, no matter how long retained, and in Germany the resulting phenomena are more generally considered to be reflex; but, however accounted for, some of the following symptoms may be constantly observed in constipation: Dizziness, headache, insomnia, mental hebetude or depression, nausea, furred tongue, offensive breath, flatulency, colics, failing appetite, as well as other indications of impaired digestion, various affections of the skin, including particularly urticaria, and often, objectively ascertained, deranged gastric secretion (especially excessive HCl) and probably lowered gastric motility, as well as indicanuria and excess of the aromatic sulphates, and of the total acids in the urine. Other objective signs are dry, hard stools, lumpy or made up of agglutinated balls of different color and consistency, or hard globular feces of various sizes, from that of hazel-nuts up, or in spastic cases, as well as in cases of organic stricture, feces moulded in narrow cylindric forms.

Periodic transient attacks of diarrhea, with usually mingled lumps and liquid feces, which are often exceedingly offensive, may be considered as a symptom of chronic constipation. In

these cases there is irritation of both the mucous membrane and musculature of the intestines by the long-continued pressure of the hard fecal masses and distention from the imprisoned gases, and probably a catarrhal process is also set up in places, through infection from the enormously multiplied bacteria in the stagnant feces, with abundant formation of organic acids from fermentation.

It is a serious mistake to treat such diarrheal attacks by opiates and astringents, or even by antiseptics alone, when nature has so clearly pointed the way to a prompt clearing out of the intestines, which should be accomplished preferably by a colon douche. Recurrent diarrheas, with either no stools or insufficient stools between, are signs of chronic atonic constipation, or else of a mild chronic enteritis, and need to be treated accordingly.

Diagnosis.—It is of chief practical importance to differentiate the atonic and spastic forms of constipation from each other, and both of these from the organic changes which may impede defecation. Westphalen* of St. Petersburg has written elaborate papers concerning both the atonic and spastic form of constipation, and has pointed out the differences between the two very clearly. Numerous authors, including Nothnagel, Boas, Flick, Fleiner and others, in Germany especially, have mentioned the spastic as a possible form of constipation, but a few exceptions do not lay much stress upon it. Many cases of this affection, which were seen in my own earlier practice, were not recognized as such. They were often given abdominal massage, not only without benefit but with the result of increasing their constipation. These were patients suffering from neurasthenia in connection with gastro-intestinal derangements, and many of them showed spastically contracted abdominal muscles and excessive knee-jerks. I do not now prescribe the usual vigorous abdominal massage for such patients, though I sometimes find them to be benefited by light stroking—effleurage; but try to cure them by general roborant measures, trusting to diet, special exercises, oil enemas, etc., to keep their bowels open. Besides the fact that spastic constipation occurs in nervous, excitable patients with heightened reflexes, Westphalen points out that in such cases the stools, though usually complete, are passed with the greatest difficulty and often only after much straining and long delay. Afterward

*Archiv. f. Verdauungskrankheiten, vol. vi., No. 2, and vol. vii., Nos. 1 and 2.

there is left behind an unsatisfactory feeling, as though the rectum had not been perfectly emptied, even when an examination would show that no feces remained there. This sensation he considers to be due to an irritated condition of the nerve-endings in the rectum. A like hyperesthesia of the mucous membrane of the bowel is supposed to play a part in producing the irregular contractions of the circular muscles, which hinder the onward progress of the feces. A contrary group of symptoms obtains in atonic constipation. Here the amount of feces passed daily is too small, not at all in proportion to the quantity of food taken, and yet the patient may pass them with little straining or effort, and feel afterward as though he had had a thorough evacuation. He may also be neurasthenic, but will not likely have such exaggerated reflexes. His abdominal muscles will not be so rigid upon palpation, and a finger introduced into the rectum will not be so tightly grasped.

With regard to the appearance of the stools in the two forms, all agree that small ones of lead-pencil or little-finger shape and size mean a spastic contraction of some portion of the bowel, when an organic stricture can be excluded, except in cases of semi-starvation, especially in cancer, as a result of which the lumen of the intestine may become greatly lessened. These stools may be canaliculated. I may add, as an important diagnostic point observed by myself, that spastic conditions are almost never constant, but the patients will at some time (often as a result or nerve sedatives) pass stools of normal calibre, whereas, when there is a permanent stricture, the stools are always in either a slender form or fluid. Westphalen also lays some stress upon the consistency of the stools, insisting that while they are very hard and dry and often covered with a thin layer of mucus in the atonic form, those passed in the spastic form contain no mucus outside or inside, but have usually a larger percentage of water and are tougher, more sticky, and of a more glistening appearance—*glänzend*. The latter also contain less gas, so that they will not float in water as normal feces or those from a case of atonic constipation usually will.

Careful palpation and percussion over the abdomen will show differences between the atonic and spastic types of constipation. In the former a more general tympany should be demonstrable, with possibly masses of hard feces to be felt in the cecum or

flexures of the colon; while in the latter type one may often feel portions of the intestine contracted like a cord under the finger. Then, in the spastic form, too, there are more frequently very sensitive spots in various parts of the abdomen, especially in the region of the umbilicus, and there are portions over which marked tympany contrasts sharply with the duller note of adjoining regions, showing imprisoned gas. Tabetic patients in an early stage are likely to present the phenomena of spastic constipation. Judging from my observation, it is highly probable that most neurasthenic patients who suffer excessively from intestinal flatulence, which accumulates in places to their great discomfort, finally passing with borborygmi through evidently narrowed coils of intestine, while the feces themselves are retained, have the spastic form of constipation, however complicated with other conditions. Finally, you may find both forms in the same case, since it is quite possible for atonic constipation to be complicated at times by a spastic condition.

From the constipation or obstruction dependent upon serious organic disease, such as strictures, tumors, inflammatory affections, etc., both the atonic and spastic form of impeded defecation can generally be differentiated by thorough and painstaking examinations, with the help of our modern exact methods. The above-mentioned hint as to the constant smallness of the stools in organic stricture should be helpful. Filling the stomach with gas and again with liquid and afterward, if necessary, treating the colon in the same way, will often reveal latent tumors and their attachment, and a thorough douching of the colon with warm water will usually demonstrate a chronic enteritis by the amount of mucus brought away.

The importance of taking the necessary pains to reach a definite diagnosis in these cases cannot be overestimated. The time has gone by when we should be content to let our constipated patients continue indefinitely with whatever laxative drug affords them the most comfortable evacuations. Our duty is to ascertain the exact cause of the constipation, and then to cure it, as is possible in a large majority of cases.

CORRESPONDENCE.

RECRUDESCENCE OF LEPROSY IN VERMILLION PARISH, LOUISIANA.

EVIDENCE THAT THE SOIL OF THE STATE IS IMPREGNATED WITH LEPROSY — SPORES — WILL THE DISEASE, ENDEMIC THERE SINCE 1765, NOW BECOME EPIDEMIC LIKE IN COLOMBIA?

SIR:—I have received the following letter:

Board of Control for Lepers Home, State of Louisiana,
Indian Camp Plantation, Parish of Iberville.
ABBEVILLE, LA., Oct. 15, 1901.

DR. ALBERT S. ASHMEAD, New York City, N. Y.

DEAR DOCTOR:—The recent recrudescence of leprosy in this town, after a lapse of many years, and in the absence of any competent proof of the source of infection, has suggested to my mind the possibility of the bacilli remaining active in the soil of the site of a former leper habitation, and it is to this point I invite your opinion. If my memory be not at fault, I read some years ago in the report of the East India Leprosy Commission, that the bacillus had been found in the earth and also in the soil of a leper's grave, but I am uninformed as to the period of their viability under such surroundings.

Some 30 odd years ago two families of lepers resided in this town; some of the members went away to die, but one in each family remained here and slowly rotted away. According to the medical teaching of those days, leprosy was held to be hereditary and non contagious, and no sanitary precau ions were observed, the dejecta and soiled dressings being pi ched out into the back yard to rot away with the refuse. The people generally shunned those unfortunates and held very little intercourse with them. In fact, the husband of the first leper died about fifteen years later, without any indication of the disease, while the wife of the other patient is still living to day, 24 years after the death of her leper husband, a hale and hearty woman.

Of the cases occurring recently, one was in a family occupying the premises in the rear of the male leper, two other cases in families residing within 100 yards of the infected spot, occurring in children born some years *after* the death of the leper. Another case occurred in a woman who lived for two years in a new cabin

erected on the site of the leper woman's home. Is there anything here of cause and effect?

Can the disease originate *de novo*, and is it endemic in South Louisiana?

Trusting that you will favor me with your conclusions in the matter, I beg to remain, with assurances of esteem,

Very truly yours,

E. J. EDWARDS, M.D.,

Member Board of Control, Lepers Home.

Here is my answer:

NEW YORK, Oct. 18, 1901.

DR. E. J. EDWARDS,

Member of Board of Control for Lepers Home, Louisiana.

DEAR DOCTOR:—In reply to your interesting letter of Oct. 15, regarding the recrudescence of leprosy in the town of Abbeville (Vermilion Parish), Louisiana, I beg to say, that we are all striving to discover the mysterious third factor in the transmission of leprosy. That there is a third factor, all leprologists, excepting perhaps Dr. Goldschmidt, of the Funchal Lepra Asylum, Madeira, will admit. By the term leprologist, I mean a man who has lived and conscientiously worked in a leper-country, and not an American or European dermatologist who pretends that the disease is curable in order that his office may be filled with patients. For my part, I am convinced that that third factor is fish, and mosquitoes acting as intermediary hosts. Possibly other insects may also operate. Certainly all leper countries are scourged by insects.

The best leprologists of Colombia, South America, where there are now 30,000 lepers, while 40 years ago there were only 400, the number which your State has to-day, believe that the microphyte of Hansen is not the initial phenomenon of leprosy. Their opinion is that the same thing happens in leprosy as in pneumonia, typhoid fever and other microbian diseases. We live in close contact with the bacilli, we take them with our aliments and drinks, we carry them in our clothes, we respire them continually, and in spite of all that they do us no harm, unless some external cause puts us in a perfect relation of cause and effect. This is very well shown, especially in the case of Friedlander's and Ebberth's bacilli (pneumonia and typhoid). But it is hardly the the same in leprosy, where there must be a vaso-motor paralysis, a shock to the peripheric nervous system (like the effect of living in a moist, sea coast climate), which prepares us for receiving the

microphytes. But even this all will not constitute leprosy. The microbes once admitted through the vaso-motor doorway help to foster the disease. New colonies appear, the circulation takes their spores up, other tissues become affected, and the leprosy goes forward. Cornil and Babes affirm that, after having been separated ten years, a fragment of leprous skin was found to contain living bacilli, which is contradictory to their rapid development, unless we admit that after desiccation the parasite can remain asleep, like the bedbugs, and exist in a latent state for an indefinite time. Why does the human organism, invaded by myriads of microphytes, wait so long before it announces their presence? The incubation period of leprosy in Japan was found to be in one case forty years! The reason of it is because the human soil is not equally well prepared. Until the nerves themselves are diseased, the bacillus will not establish itself in them, it then colonizes itself, overcrowds to other tissues. So it goes on spreading. Thus we see lepers who have lived many years without suffering great pains, nor lesions of rapid progress, who suddenly, unexpectedly, present alarming symptoms, which in a few days carry them to the grave. Until these alarming symptoms present, even no diagnosis of leprosy can be made. In short as Gakies says, leprosy is a microbian disease, but whose primordial symptoms and lesions are localized in the nervous system, and, *independent of the microbe*, sometimes through life. It is possible to carry the bacillus of leprosy without being a leper; and vice versa, according to Cornil and Babes, there are lepers without bacilli.

The bacteriological studies show that the leper discharges from his cutaneous and mucous surfaces an infinity of bacilli *and germs;* just as from an ant-hill, ants creep out everywhere. The bacilli are found in the saliva, the urine, the sperm, the vaginal mucus, in the nasal mucus, in the tears, in the pus, and even in the milk. In New South Wales, Dr. Ashburton Thompson wrote me that he had found the bacilli in leper's blood serum, drawn from the ears. The microphytes have a very long existence, and a power of resistance which protects them against the ordinary climacteric influences. Spread in such profusion, it must no doubt then surround us everywhere (where lepers are), and if it has not as yet been discovered in the atmosphere, it is because it has not been sought there, or because it is not known well enough; that is, its biology, its spore life. In a land of leprosy, we carry all about

us the germs of the disease, and all we have to do is to beware from making ourselves an appropriate soil for them. The contagion can be made by the intermediary of tainted objects. Carried by lepers, for instance, in their clothes; but without aptitude for contracting the disease there is no contagion. The leper will infect us, if we are prepared for that, as the air would do, or any other object conducting the microbe; but without lesions of the peripheric nervous system and of circulation (a numbing by exposure to cold is enough), or to speak more clearly, without an entrance door, the disease is impossible. Leprosy therefore is a disease which can be caught by contagion, that is, by contact with lepers, or *without it*—it is enough to be apt to receive the microbe, which may be caught, wherever it is found, and even be carried on the body for a long time. In leprosy a local lesion is indispensable. Heredity of leprosy cannot be admitted, as it is a microbian disease.

There are many instances of leprosy being contracted by intimate contact with objects contaminated by lepers. The following one will interest you: Leloir, the greatest leprologist of France, mentions an official of the French colonial administration who died of leprosy, in the island of Mauritius. His vacant place was taken by another employe, also French, who hired the same furnished apartment in which the defunct had lived. The lodgings were occupied just as they were, without any alteration, without disinfection; the man simply, as it were, putting himself into his predecessor's furniture. After some time the new official became a leper, and was compelled to return to Paris, to be treated there for tubercular leprosy, by Dr. Cornil.

Until we know the life history of the bacillus of leprosy outside of the human body, its spore-life, its intermediary hoet-life, its cysticercoid or larvæ life, in the mosquito, fish, earth worm, or whatever it may be, we cannot explain a recrudescence of the disease.

Now, as to the question of earth contamination:

Dr. Beaven Rake of the Trinidad Leper Asylum had some correspondence with me, just before his lamented death, as to this question of intermediary spore-stage of leper-bacilli while existing outside of human bodies. Both of us believed in it. But whether they could live in inorganic as well as organic substance, we puzzled over. To test the point, the possibility of leprosy pores, or bacilli, existing in ordinary soil, Dr. Rake examined

earth from the surfaces of eight graves in the cemetery of his leper asylum. He thought it possible that bacilli might have been brought to the surface by earth worms, as was shown by Pasteur to have been done in anthrax. A few cubic inches of surface-earth were taken from each grave and examined microscopically. Many sod-bacilli were found, and the earth was stainable, quite deeply. The only case in which bacilli were not found was that of the grave where was buried a leper who had not had a necropsy performed. This would indicate that bacilli from the body had not been released from their imprisonment.

Similarly rod-bacilli, and staining of earth, were found in the surface of a grave where a consumption patient had been buried who was not a leper at all, who had come into the asylum by a mistake.

Dr. Rake concluded that those rod-bacilli were certainly far too large for leprosy-bacilli, and were putrefactive bacteria. He thought all the earth in the leper asylum cemetery had become so soaked with leprous products that it retained the characteristic stain. But earth from his own garden, a mile away, also gave rod-bacilli and stained the same. It is, of course, a question, as Dr. Beaven Rake said, whether the *spores* of the bacillus lepræ will answer to the same tests as the bacillus itself. If they do not, they might readily escape recognition. Cultures were also tried from portions of earth from the graves of lepers. Rods of various lengths, and micrococci were observed, but not leprosy bacilli. We are therefore put back to where we started from. Yet it is my opinion, as it was Dr. Rake's, that leprosy cannot originate *de novo*.*

However, many leprologists (and I am one of them) believe in the identity of the tubercle and leper bacilli. For with the disappearance of leprosy from a country once scourged by it—for instance, Hawaii and Norway—tuberculosis takes its place.

As to your question whether leprosy is endemic in South Louisiana. It is. Mr. E. Foster, of the *Daily Picayune's* staff, wrote me in 1895 that it had been so since 1765, when the Acadians introduced it. These "Cagans," as they were called, were Evangeline's people, who, after the dispersal of French neu-

*Kierulf (Virchow's Archiv, 1853, p. 13) and Landre (p. 28) observed that cases arising *de novo*, i. e., according to him, not from heredity, *always arise in places where the disease is endemic and never where it is unknown.* While according to Holmsen (Landre, p. 29), when it arises in a new district, *it is always caused by a leprous individual.*—Munro, Leprosy, page 79.

trals from Nova Scotia, which is an endemic focus still, reached Southern Louisiana, one hundred and fifty years ago.

In Western and Southwestern Louisiana, where whites predominate, 75 per cent. are Acadian and Italian. White colonists also came to Southern Louisiana from the leprous Canaries. Alsatian blood of your Vermillion Parish is leprous, since Madam Surblanc's time. Old Druet, her father, evidently had brought the germ from France. And in France to-day there is a similar recrudescence of leprosy, which Zambaco Pasha claims is a rejuvenation, a reincarnation, of the germ of French leprosy that has been lying dormant or dead there since the middle ages, when there were in France 1900 and in Europe 20,000 leper-asylums. Lower La Fourche, La., has had endemic leprosy since 1858. Evidently the mosquitoes of the rice-fields near Harang's canal are infected likewise. Maybe the fish of the bayous.

Trusting that I have fully answered all your questions (according to my best ability I have tried to do it) and thanking you for the compliment of your letter of enquiry,

Believe me very sincerely yours,

ALBERT S. ASHMEAD, M.D.

P. S. Please present my kind regards to your honored secretary, Mr. Phelps.

NEW YORK, Oct. 29, 1901.

SIR:—By the enclosed clipping you will see how Virchow has pictured himself amidst fossils. Yours truly,

ALBERT S. ASHMEAD, M.D.

A souvenir photograph sent by Prof. Virchow to his friends shows the grand old German man of medicine in his laboratory surrounded by eight skeletons and at least a hundred skulls. They form cheerful company for a man of eighty who must be human enough to think of death once in a while. It is the privilege of the great to be unique. A corresponding picture of Mr. Croker might show him purusing his book of personal cartoons, and a photograph of Devery in his happiest mood reveal him reading an English grammar.—*N. Y. World.*

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A. H. OHMANN-DUMESNIL, A.M., M.D.,
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EDITORIAL.

THE CLOSE OF VOLUME LXXXI.

With this number another volume of the Journal comes to a close. We do not desire to trumpet its qualities nor call attention to its distinctive features beyond the fact of observing that it has continued to occupy the same high plane it always did, and the further fact that it has advanced the interests of the medical profession as a whole and carefully avoided furthering individual interests. The great men who are made by journals very quickly find their level, and those who have made themselves by good, honest and conscientious work, rise higher and higher without conscious effort. We wish to take this occasion to thank our subscribers for their loyalty and our advertisers for their kind patronage. To both we desire to bring this occasion to bear to them our best and most cordial wishes for a Merry Christmas, and hope that the time of Yule-tide will bring increased business and usher in a season of real and undiminished prosperity.

THE NECESSITY OF VENEREAL HOSPITALS.

It has long been argued that to obtain a thorough medical education it is necessary to study and sojourn a certain length of time in Europe. That there is some portion of truth no one will deny who is acquainted with transatlantic conditions. But that the same are unattainable in this country is an assertion which can be easily refuted. That to which we desire to particularly call attention is the fact that we do not have venereal hospitals. England has her Lock Hospitals; Paris has her Hôpital Ricord (formerly du Midy), Lourcine, Val de Grace, and several others, not to omit the Hôpital St. Louis. In these various institutions a student of venereology can find such an abundance of material to study that he will be overwhelmed by its great quantity. This does not include the clinics, which always furnish a mass of cases sufficient to occupy the time of any one who desires to study the subject.

The reasons which naturally suggest themselves in favor of establishing venereal hospitals in this country are two-fold in character. The first and most important one is the advantage it will secure to the public at large. To begin with, it will have the effect of keeping venereal patients in hospitals until they will no longer be dangerous to others. This prevention of the further dissemination of venereal diseases is certainly an advantage which cannot be overlooked by any one familiar with the rapid and destructive dissemination of these troubles. Women, who are the most dangerous class, can thus be segregated more thoroughly, and by adding legislative enactments in the way of registering prostitutes much could be done in the work of diminishing the number of cases of syphilis and other infectious troubles of a purely venereal character. These very enactments would also act in the way of enforcing the compulsory detention of venereals until they have passed the dangerous infective stage, and by making them come to the clinic every week, once or twice, for examination, any danger could be promptly strangulated. All of this is certainly to be regarded as a positive benefit to the public at large.

Another benefit which would accrue, would be to the medical profession. With hospitals of this character there could no longer exist any excuse for the unfortunate ignorance which now exists on the subject of venereal diseases. Not only would stu-

dents and physicians become proficient in diagnostic ability, but better methods of treatment would be learned by them, this again being to the benefit of the public. In fact, no matter from what point of view we consider the subject, nothing but benefits can be seen accruing from the adoption of such measures. We hope to see the subject agitated in the larger cities, where venereal diseases are present in large numbers and do not seem to be inclined to decrease. The existence of venereal hospitals has had a salutary influence in the larger cities of Europe in the way of diminishing these troubles and would certainly act as well in America.

A REMEDY PROPOSED FOR THE EVIL OF SUBSTITUTION.

Dr. J. D. Williams says, in one of our exchanges: There can be no subject of more importance to physicians than the violation of their confidence on the part of a dishonest dispensing druggist. Law will not make a dishonest man honest, but the right law properly executed will prevent a criminal's further infliction of injury upon society. The requirement of a license to all druggists who dispense drugs or medicines, revokable upon the licensee's being convicted of substituting any ingredient drug or medicine other than and in lieu or instead of that specified in the prescription, order or request in writing, of any physician, would go a long way to aid in the matter of honestly filling prescriptions. Let the medical societies induce their respective State Legislatures to enact a law requiring such a license, with a simple and practical procedure for establishing the guilt and enforcing the penalty against infraction, and the practice of substitution would soon cease.

Let proceedings for revocation of license be before the court, board, or officer, empowered to issue the license, and be set in motion at the relation of either the Board of Health, a local medical society, or the purchaser upon whom the fraud and imposition had been done, or of the physician by whom the prescription or order was issued or given, or of any person, firm or corporation for whose brand or make of drug or medicine the substitution had been perpetrated. Let the licensing board, court, or officer be empowered to issue citations, subpenas for witnesses, to administer oaths, and be given all other requisite powers for duly trying the issues and revoking the license of the guilty.

BOOK REVIEWS.

Pediatrics. The Hygienic and Medical Treatment of Children. By THOMAS MOYER ROTCH, M.D. Third Edition; Rearranged and Rewritten. Royal 8vo., pp. 1021. Illustrated by Numerous Engravings in the Text and by Colored Plates. [Philadelphia and London: J. B. Lippincott Company. 1901. Price, $6.00.

The first edition of this work appeared in 1896, and so great and favorable an impression did it make that in a month a second edition of 5,000 was issued. At present we are called upon to review the third edition, which is both more systematic and in better proportion than its predecessors. The entire work has been recast by its author, and this has been necessitated by the advances and discoveries which have been made in pediatrics during the past six years. These changes have been of so radical a character, both as regards the text and the illustrations, that the work before us is practically a new one. For this reason it may not be inappropriate to give a short analysis of the book as it now appears.

It is arranged in seventeen divisions, the first of which is taken up with the subject of the normal infant. In Division II. feeding is the subject considered, and here the latest advances in this most important subject are noted. Division III., whilst comparatively short, is most important, dealing as it does with the general principles of examination and treatment. Premature infants is the subject of Division IV., and it is a very well considered chapter of the book. The diseases of the new born, both general and local, are taken up in Division V. in a general way. The diseases of nutrition are next considered in Division VI. The commoner affections of the skin are given a due share of attention in Division VII. The specific infectious diseases are next spoken of in Division VIII., and this is a more than ordinarily interesting and useful one. Division IX. is devoted to diseases of the mouth, nose, ear, naso-pharynx, and pharynx, the succeeding division being being taken up by the diseases of the larynx, trachea, bronchia, lungs, and pleura. In Division XI. we find diseases of the heart and pericardium discussed. The diseases of the esophagus, stomach and intestine very justly occupy a large space in Division XIII., embracing no less than 57 pages. In Division XIV. we find the diseases of the kidney, bladder, and genital organs taken up. The blood, the lymph nodes, and the ductless glands are considered in a most interesting manner in Division XV.

The largest division in this work is that devoted to diseases of

the nervous system. In this the author shows his perfect mastery of the subject in a better manner, perhaps, than in any other portion of his treatise Division XVI. may very justly be said to be the best and most elaborate in the book. Division XVII., which concludes the work, deals with a number of unclassified diseases, such as hemophilia, purpura, lymphatism, myalgia, arthritis deformans, diabetes insipidus, diabetes mellitus, and chronic rheumatism. It is a very useful and satisfactory division.

To do this book full justice would require more space than is at our command. Suffice it to say, that the author shows that he has perfect command of his subject, and writes thereof in a manner which demonstrates the fact that he has mastered it completely. We are much pleased with this edition, which shows marked improvement over the preceding ones, and demonstrates most thoroughly that the author is not only progressive, but a very consistent worker in his chosen field.

The publishers are to be congratulated upon the manner in which they have produced the work. It is printed upon fine paper, the press work is above criticism, and great liberality has been shown in the matter of illustrating, no less than 205 figures in black and twelve plates in colors appearing. An especially notable feature is the reduction in price of the work to $6.00, something which all purchasers will appreciate. We have no doubt whatever that this edition will meet with a large and ready sale, as its present improved appearance and arrangement will readily find it purchasers. We are certain that no one who purchases this book will be disappointed, as it is worth the price asked for it many times over. It is a classic work on the subject of pediatrics, and destined to maintain this position for many years to come.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M., M.D. Vol. III. Climatology—Health Resorts—Mineral Springs. By F. PARKES WEBER, M.A., M.D., F.R C.P (Lond.), with the Collaboration for America of GUY HINSDALE, A.M., M.D. In Two Books. Book I. Principles of Climatotherapy—Ocean Voyages—Mediterranean, European, and British Health Resorts. 8vo., pp. 336. Illustrated with Maps. Book II. Health Resorts of Africa, Asia, Australasia, and America. Special Therapeutics with a Special Article on the Hawaiian Islands by Dr. TITUS MUNSON COAN, of New York. 8vo., pp. 420. Illustrated with Maps. [Philadelphia: P. Blackiston's Son & Co. 1901. Price, for the complete set of eleven volumes, cloth binding, $22.00

Many separate books and monographs have been written dealing with climatotherapy, health resorts, and ocean voyages; but

they have treated those subjects individually or by regions, and the volumes before us constitute the first attempt in recent years to furnish a systematic treatise on the subject. A careful examination of these volumes will show that they contain an unbiased account of health resorts and mineral springs in both the old and the new world. Furthermore, correct information is furnished on the climate of these countries, and this is rendered more clear by a large number of maps which are absolutely correct. The subject of climatotherapy is one which is but imperfectly understood by the medical profession in general, and a treatise like the present one, which furnishes reliable information on the subject, cannot but prove invaluable to the physician who desires to treat a patient in this manner. The work does not give a catalogue of diseases and one of the climates adapted to them. The author has made it his endeavor to explain the general principles which are involved and present them in a clear manner. Knowing these principles, and remembering the different climates, makes it an easy matter to determine which locality in a large number will be of the greatest advantage to the patient who must leave home. A proper appreciation of these principles will have much influence in preventing the sending of many patients to their graves, as is but too frequently done to-day.

In Book I. the effects of soil, temperature, dryness, altitude, proximity to the sea and climatic features are fully entered into and discussed. In this the author has had the assistance of his father, Sir Herman Weber, who is, perhaps, the best living authority on climatology to-day. The respective advantages and disadvantages of the soil, etc., are mentioned fully although concisely. Of course, this section only deals with these features as observed in England and the Continent. It is to Book II. that we must turn for the physical, sanitary and social characteristics of the various regions and health resorts of Europe. The author enters into these questions with greater or less detail, and his statements are based on personal observation. Europe, Asia and Africa are thus taken up in detail more or less marked. Dr. Hinsdale supplies equally reliable data for the American continent and the West Indies. He is certainly competent to do this, being a prominent member of the American Climatological Association.

Being furnished the requisite data by such competent men, the physician should certainly be able to give the proper advice in regard to the localities most fitted for patients who are in need of climatic treatment. Many other features are considered in this treatise besides the removal to another locality. Thus, attention is directed to the features which may detract from the desirability of regions otherwise considered healthy and to the dangers which are incurred by change of locality in certain conditions. In fact, a complete consideration of the subject is given. Indi-

cations and counter-indications are given, and the physician who carefully reads these volumes will have his ideas enlarged and, at the same time, acquire a sum of knowledge which cannot but prove of the highest value to him in his practice. He will be enabled to be definite in ordering a certain health resort and his patients will benefit by his knowledge.

We are much pleased with these two volumes, and are sure that all who read them will see a new field opened to them as well as a satisfactory one. The publishers have certainly done their full duty in issuing such a handsome work at such a moderate price.

Materia Medica, Pharmacy, Pharmacology and Therapeutics. By W. HALE WHITE, M.D., F.R.C.P. Edited by REYNOLD W. WILCOX, M.A., M.D., LL.D. Fifth American Edition; thoroughly Revised. Large 12mo., pp. 744. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, cloth, $3.00 net; full leather, $3.50 net.

The popularity of this book on materia medica is fully evidenced by the number of editions through which it has gone. Whilst the work of the author is of a superior character, its value has been greatly enhanced by the additions of the editor, who has earned for himself an enviable reputation as a writer on the practice of medicine, his therapeutic contributions being of a high order of merit. In fact his additions to the present work have greatly increased its value, and it may be said with truth that the American edition is much superior to the English one. It is a pleasure to read a work edited in such a thorough, conscientious and capable manner. The additions which have been made are always to the point and valuable in every instance. We are pleased to note how thorough the revision is which the editor has made of this edition. He has made many additions which concern the latest therapeutic agents whose worth has been proved, and the reader or student of this book can remain assured that everything which is given is correct and of such a nature that reliance may be placed upon it.

After disposing of definitions and pharmacy in general, pharmacology and therapeutics are taken up. In this division of the subject prescribing, the actions of drugs and the various drugs acting on the different tissues and organs are taken up. Pharmacopeial inorganic materia medica is considered in twelve groups, and these are all given in a clear though concise manner, although sufficiently explicit to cover the whole subject in an adequate manner. The same may be said of the parts devoted to pharmacopeial organic materia medica, and pharmacopeial organic animal materia medica. The work closes with an appendix on vegetable natural orders, animal natural orders, and Latin phrases used in prescriptions.

The coal tar products are given full mention, whether they be

official or non-official, and very justly so when their large and extended use is taken into consideration. The actions of drugs, medicinal and toxic, are fully considered in those which have acquired a polemical standing. Those agents which are antagonistic are also fully discussed, and therapeutic action receives a large share of attention, so that considered on the whole a very full account is given.

The book is a most useful one and put in such shape that reference is easy, and the volume is of such a size that it can be easily handled. It is neatly printed on good paper and durably bound.

Diseases of the Digestive Organs in Infancy and Childhood. With Chapters on the Diet and General Management of Children, and Massage in Pediatrics. By LOUIS STARR, M.D. Third Edition; Rewritten and Enlarged. 12mo., pp. 448. Illustrated. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $3.00 net

In presenting us with this work Dr. Starr has made a really valuable contribution to pediatrics. He has written a work, the result of deep thought and observation, and his chapter on the management of infants and children is worthy of being reprinted separately and distributed to parents who, unfortunately, are imbued with the idea that they know all about the subject, and merely place their offspring beyond all help of a medical nature. In order to obtain a better and more adequate idea of this book, a short synopsis of its contents may not be amiss, and will show the reader the thoroughness with which the author has considered his subject.

The introduction is devoted to the general management of children, including weak and immature infants. Then comes a consideration of massage in pediatrics. This the author considers very valuable, both for the development and treatment of the child; but he insists upon scientific massage, laying great stress upon Murrell's directions on the subject. In Part I. we have presented very clear descriptions, including treatment, of simple atrophy, scarbutus, rachitis and lithemia. In Part II. the more important diseases of childhood, those of the digestive organs, are presented to us. Beginning with stomatitis in its different varieties, we are led to dentition and the various complications attendant upon it. In the next chapter of this part the affections of the throat are considered. It is in this chapter that so-called "diphtheritic sore throat," which is not diphtheria, is spoken of and disposed of in a very summary manner. Chapter III. is the one which will probably awaken the most interest in physicians. It is the longest in the book and very justly so, as it deals with affections of the stomach and intestines. This chapter has been well elaborated, and is more than ordinarily val-

uable. In Chapter IV. we are met with a short but well considered article on tuberculosis of the mesenteric glands and intestines. Affections of the liver take up Chapter V., and affections of the peritoneum have Chapter VI. devoted to them.

Taken as a whole, this book is well written and will prove of real value to the general practitioner, who always has children to treat. In this work he will find many of those things of which he is in need. The scheme on which it has been constructed is a natural one, and throughout the work the author has endeavored to write to the point, and he has succeeded admirably. We are very much pleased with this edition, which is a real improvement upon former ones. The publishers have made the book a handsome one, both in paper and binding. The press-work, of course, is unexceptional.

The Diagnosis of Nervous and Mental Diseases. By Howell T. Pershing, M.Sc., M.D. 12mo, pp. 223. Illustrated. [Philadelphia: P. Blakiston's Sons & Co. 1901. Price, $1.25 net.

This little book is full of useful, practical information. The author has followed a plan which cannot but prove successful. It is the adoption of a table, or "key," such as is used in botany, zoölogy, chemistry and mineralogy. By means of this a proper examination of a case will enable a physician to classify a disease as well as recognize it. This is certainly a most useful means, as it prevents hap-hazzard diagnoses and places the physician in a position to accurately determine the particular form of nervous or mental disease with which a patient is affected. It is for this reason that much stress is laid upon the proper examination of the patient. To this is added the general significance of symptoms. Maps of motor points are given in connection with the consideration of electrical reactions and trophic conditions of the muscles.

To give an example of the method pursued by the author, we take a passage at random: "Absence of light reaction (in the eye), if not caused by a drug or by disease within the orbit, is proof of cerebral or cerebro-spinal disease, which is almost invariably organic. Absence of light reaction together with preservation of reaction to accommodation constitutes the Argyll-Robertson pupil, a sure sign of degenerative disease of the central nervous system, often seen in tabes and sometimes in paretic dementia."

The recognition of special diseases is, beyond all doubt, the part in this book which will be most frequently consulted. If the examination be thoroughly made, the diagnosis is very easily arrived at by consulting the tables of symptoms, which are each in turn followed by the diagnosis. As the principal symptom is made the key-note in each, no one should experience any difficulty in formulating a proper diagnosis with the help of this book. It is

a most excellent manual, and one which is destined to prove of great value to those who are not specialists in neurology. As a handy book of ready reference it is destined to occupy a prominent place in the book-shelves of physicians. Students in medicine will find it of the greatest help in reading, and in after years when they practice medicine.

Diseases of the Intestines. Their Special Pathology, Diagnosis and Treatment. With Sections on Anatomy and Physiology, Microscopic and Chemic Examination of the Intestinal Contents, Secretions, Feces, and Urine; Intestinal Bacteria and Parasites; Surgery of the Intestines; Dietetics; Diseases of the Rectum, etc. By JOHN C. HEMMETER, M.D., Philos. D. In Two Volumes. Volume I., Large 8vo , pp. 742. Anatomy, Physiology, Intestinal Bacteria, Methods of Diagnosis, Therapy and Materia Medica of Intestinal Diseases, Diarrhea, Constipation, Enteralgia and Enterodynia, Meteorism, Dystrypsia, Enteritis, Colitis, Dysentery, Intestinal Ulcers, Intestinal Neoplasms, etc. With many Original Illustrations, some of which are in Colors. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $5 00 per volume.

A thorough examination of the work before us has led us to the conclusion that it is superior even to the same author's work on diseases of the stomach, concerning which Prof. I. Boas of Berlin has said that it was the best contemporary treatise on diseases of the stomach which we possess, not only in America, but in the whole world. The same can be said with equal truth of Hemmeter's Diseases of the Intestines. It is a most thorough and finished work, high class from a scientific aspect and yet sufficiently practical to meet the wants of every one in search of primitive therapeutic directions. This is one of the features which particularly recommends the work. It is both scientific and practical, each portion being elaborated with that completeness and precision which characterize the author's work. He has always had the happy faculty of not only making the treatment of his subject interesting but also investing it with that method of elucidation which has always made it both valuable in practical application and satisfactory in producing good results. These are certainly results which should recommend it to the favorable consideration of every intelligent practitioner of medicine, and act as an incentive to all to perfect themselves in the examination, diagnosis, and treatment of intestinal diseases.

A rapid survey of the contents of this volume may give the reader some idea of the scope of the work, and that portion of the subject covered in this volume. Part First deals with the anatomy, histology, physiology, bacteriology, and pathology of the intestines; also physical methods of diagnosis. This part is divided into eleven chapters. Chapter I. includes the anatomy

and histology of both the small and the large intestine, and with the anatomical aspect of the abnormalities of position and form. This is a most thoroughly considered chapter, which is richly illustrated with plates of a superior style of execution. In Chapter II. the physiology of the intestines is taken up, to be followed by absorption from the intestines. The peristalsis of the intestines is the subject of Chapter IV., defecation receiving due consideration. Chapter V. is concerned with the utilization of food in the stomach and intestines of the healthy man and under abnormal conditions. Then comes disturbances in the secretory functions of the intestines, the pancreas, and the liver, which form the subject matter of Chapter VI. A most important chapter is the next, devoted to the intestinal bacteria. All the pathogenic bacteria of the intestines are fully considered in Chapter VII., and this forms one of the most important in the work. Chapter VIII. is no less important, as it gives methods and technics of diagnosis, in which the author easily demonstrates the thoroughness with which he does this. Another important chapter in this part is that of the diagnostic significance of examination of feces and urine, taken up in Chapter IX., and that of chemical and physical examination of the gastric functions for intestinal diseases. The concluding chapter of this part is taken up by the subject of duodenal intubation, for which purpose the author recommends the Kuhn duodenal tube.

Part Second is taken up by the subjects of diet, the therapy and materia medica of intestinal diseases, considered in a general manner.

Part Third is devoted to the intestinal clinics. In this the various chapters, which number nine, are given over to the consideration of special diseases. Thus diarrhea obstipation, coprostasis, intestinal colic, enterodynia, meteorism and tympanites are the subjects of the first four chapters of this part. In the next five chapters we find attention given to intestinal indigestion, dystrypsia intestinalis, enteritis, dysentery, ulcers of the intestine, and intestinal neoplasms. Among the most noteworthy chapters in this part are the three last. The subject of dysentery is most thoroughly considered, as is also that of ulcers. Intestinal neoplasms, both malignant and benign, will open up a new field for observation and investigation to many who have not even had an idea of their existence. It is in this respect, among others, that the author has conferred a real benefit upon physicians in pointing out conditions of the intestines, which they either overlook or whose existence had never been pointed out to them. We are very anxious to see the next volume, which will no doubt be of the greatest interest, both from a pathologic and therapeutic point of view.

Some especially good features in the volume before us are the very excellent engravings and plates which are liberally fur-

nished. The bibliography given throughout the book shows an immense amount of research on the part of the author, and it is modern. The book closes with an index to authors and one to subjects, both being thorough and naturally most convenient for reference. The publishers have made the book a most handsome one, the typography, binding and paper being of the best. We advise all who possess Hammeter on Diseases of the Stomach to get the work under review, and those who possess neither could do nothing better or more to their profit than to add both to their libraries.

The Microscope. An Introduction to Microscopic Methods and to Histology. By SIMON HENRY GAGE. Eighth Edition. Revised, Enlarged, and Illustrated by Over Two Hundred Figures. 8vo., pp. 299. [Ithaca, New York: Comstock Publishing Co. 1901.

The name of Simon Gage is one of those long since identified with American Microscopy. Many and valuable have been his contributions to the purely technical part of the subject, and the value of his methods in teaching is amply testified to by the proficiency of his pupils in Cornell University. All who have ever had the pleasure of coming in close contact with Dr. Gage are unanimous in their expressions of his worth and merit as well as enthusiasm in microscopy. His book, which is before us, has always been a popular one with workers with the microscope. His directions are so plain, his admonitions so sensible, and his technique so rational that very few who are familiar with the instrument of which he speaks will find the least room for criticism and such as do will justly be looked upon as hypercritical.

In this last edition of The Microscope we find many valuable additions, besides a most thorough revision of the work. One of the most valuable parts is that devoted to the microscope and its parts. In this the author discusses all makes of microscopes, and we find that he gives valuable data concerning all without fear or favor. He has thus made his book a valuable guide for all those contemplating the purchase of an instrument. Another subject which he elaborates, and a most important one, is lighting and focusing. In fact, throughout the work we are given these valuable bits of information, so that the book becomes a veritable mine of reliable facts which can be referred to by any user of the microscope. We are very favorably impressed by the work and would recommend all who wish a good guide to obtain a copy. It is both safe and reliable as well as useful and instructive; and no microscopic laboratory can be considered well equipped which does not possess a copy for reference and consultation.

A Text-Book of Medicine. For Students and Practitioners. By DR. ADOLPH STRUEMPELL. Third American Edition, translated, by permission, from the Thirteenth German Edition, by HERMAN F. VICKERY, A.B., M.D., and PHILIP COOMBS KNAPP, A.M., M.D. With Editorial notes by FREDERICK C. SHATTUCK, A.M., M.D. 8vo., pp. 1242. With One hundred and Eighty-five Illustrations in the Text and One Plate. [New York: D. Appleton and Company. 1901. Chicago: D. Appleton and Co., 203 Michigan Ave.

This is a master-work which has been translated in almost every modern tongue, and deservedly so. In the volume before us we find the latest translation. This latter has been done from the latest German edition, which is the thirteenth, thus testifying to its popularity at home. The work is popular everywhere, and most deservedly so. The author has judiciously refrained from attempting to write a work which would include everything that has been written on the subjects which he considers. He has not had for his object the supplanting of all works of reference by his; and, as a result, he has produced one which is superior to any so far issued from the pen of any one writer on the subject of medicine. Pathology has always been the strong point in this work, and the author correctly argues that, having good knowledge of the pathology of a disease, the treatment becomes comparatively a simple matter. It must not be inferred from this that the subject of therapeutics has been neglected or is inferior to any other portion of the work. In fact, the most rational and modern treatment is given, so that, taken on the whole, the book is as valuable a one as the medical student or practitioner could consult.

There is nothing in the work which has not undergone the most thorough revision at the hands of its author, and this last edition gives abundant evidence of the care which has been taken in making it. Additions of a valuable character have also been made and entire chapters rewritten. Advances made in medicine are so numerous, and many are so important, that they necessitate much work on the part of him who desires to keep pace with them. Of course, the author has not incorporated in his work any but those which have been satisfactorily established. To have mentioned all would have made a very bulky work whose value would have been questionable. The judicious selecting and careful sifting of therapeutic methods and pathological findings have been the methods used, and the result is a most thorough, reliable and valuable book. It is destined to maintain the high position it has gained among readers of English, and if anything its popularity is certain to increase. We are certain that as it becomes better known it will be met by a greater demand and new editions will be called for frequently in this country.

That which enhances the value of the American edition is the fact that the translation which has been made has not been merely perfunctory. The two translators have made many additions, which are easily recognized, as they are inclosed in brackets and signed by an initial. Dr. Frederick C. Shattuck has made manny additions which are desigated by being simply enclosed in brackets. The number of contributions so designated is comparatively large, and taken in conjunction with those furnished by the translators, they furnish quite a valuable addition to the work. In addition to this a great many passages have been adapted to this country, so that the reader may arrive at a much better understanding of them. This is certainly a very judicious method of presenting such a treatise to the reader for whom it is intended. The translation throughout is free and easily understood. In fact, it is well done in a competent manner.

The concluding part of the book is devoted to Diseases of the Nervous System. It embraces some 418 pages and fully demonstrates that the author is a master of his subject. The text is very satisfactory and the illustrations are good In fact, this part alone would be sufficient to establish the worth of the volume before us. In speaking of the filaria sanguinis the author mentions the fact that it is the cause of chyluria, but fails to state that hemato-chyluria is also found in connection with this parasite, not only in tropical climates but in the temperate zone as well, as has been observed by the writer of this review.

All in all, the work of Strümpell is a superior one and well deserving of a prominent place on every physician's bookshelves. The publishers have issued this edition in magnificent style and have not been chary in the way of furnishing illustrations, which are all well executed and of a superior character. The paper, binding and typography are of the best, and the book will recommend itself at sight.

A Treatise on Surgery. By American Authors. For Students and Practitioners of Surgery and Medicine. Edited by ROSWELL PARK, A.M., M.D. Third Edition, Enlarged and thoroughly Revised. Royal 8vo., pp. 1408. With 692 Engravings and 64 Full-page Portraits in Colors and Monochrome. [New York and Philadelphia: Lea Brothers & Co. 1901. Price, cloth, $7.00 net; leather, $8.00 net.

This third edition of Park's Surgery certainly places it in the position of being the *facile princeps* of American works on the subject, and it will bear comparison with any published in Europe on general surgery. That this fact has been appreciated is borne out by the further fact that the present is the third edition in five years, which certainly speaks well for the book as well as for the activity of interest of Americans in its subject. The work

before us is one which is complete in one volume, which, though large, permits its consultation without the necessity of referring to several volumes. It covers the whole field of surgery, and most efficiently so, as the collaborators have been chosen each one for the subject in which he has shown the greatest aptitude, and in which he has demonstrated his pre-eminence. This necessarily makes the work one of the greatest value, and one upon which the greatest dependence can be placed. Each collaborator is an authority upon his subject and this makes the book not only of the highest value to the student and practitioner, but also one that may be profitably consulted by the surgeon. The work is a comprehensive one and the revision has been thorough, thus bringing it up to the latest date. We have no doubt whatever that it is destined to retain the high position it has earned for itself, as it was fully deserved, and will continue to be so for some time to come.

To write a review of such a complete and large work is a difficult matter, and to take into consideration each separate contribution would require an enormous amount of space which, whilst the book is fully deserving of it, cannot well be devoted to it in this place. Some of the most salient points, however, are deserving of mention. The following subjects have been given a fuller presentation along the lines of the latest advances in these rapidly developing topics. The distinction between Hyperemia and Inflammation is made clear and strong. The practical importance of Bacteriology in surgical practice is properly insisted upon and its utility fully demonstrated. Auto-intoxication, the Surgical Sequelæ of Acute Non-Surgical Diseases, the Surgical Pathology of the Blood, are subjects which are fully developed, as their importance fully deserves them to be. These methods have been followed throughout the book so that it may be considered, as it really is, fully abreast of the times and occupying that high place which characterizes our best medical colleges.

Since the last edition appeared two deaths have occurred in the corps of editors. The lamented death of Dr. James H. Etheridge, of Chicago, and H. H Mudd, of St. Louis, has necessitated certain changes, which, as Dr. Park states in his preface, are inevitable in a work like this in its successive revisions. The chapter on Surgical Gynecology has been most ably prepared by Dr. Montgomery A. Crockett, Buffalo. The chapters on Fractures and Dislocations have been revised by the editors.

The chapter on Cysts and Tumors is one of the most important in this book. The editor very gratefully acknowledges the assistance given him by Dr. Henry B. Gaylord in the preparation of illustrations as well as his researches into the cause of morbid growths. These embrace the latest and most noted advances in this field, which to-day is engaging the attention of the leading

investigators throughout the world. Dr. Irving P. Lyon contributes a chapter which is new in this edition. It is on the subject of Blood Examination Applied to Surgery, which is daily assuming more and more importance.

A notable feature of the work before us is the profusion of good illustrations in it. It is not only in their number that this is evident, but in their excellence and the good selection which has been made. They are for the most part original and very demonstrative of that which each one is intended to represent. The pictures of microscopic appearances are particularly good. The colored plates and those in monchrome are particularly excellent and they are quite numerous, no less than 64 full-page plates appearing in the book. The publishers have been very liberal in this respect and have also produced the book on extra good paper. The binding is also most attractive. Taken altogether the volume before us is a marvel of cheapness when every good feature connected with it is taken into consideration. We anticipate a rapid exhaustion of this edition as the demand can be readily filled on account of the comparatively cheap price at which it is issued. Besides, no one who desires to be at all up with the times can afford to be without it or acknowledge that he does not possess this latest and best authority on surgery.

LITERARY NOTES.

Books Received.—The following books were received during the past month, and are reviewed in the present number of the JOURNAL:

Pediatrics. The Hygiene and Medical Treatment of Children. By Thomas Morgan Rotch, M. D. Third Edition. Rearranged and Rewritten. Royal 8vo., pp. 1021. Illustrated by Numerous Engravings in the Text and by Colored Plates. [Philadelphia and London: J. B. Lippincott Co. 1901. Price, $6.00.

Materia Medica, Pharmacy, Pharmacology and Therapeutics. By W. Hale White, M.D., F.R.C.P.; Edited by Reynold W. Wilcox, M.A., M.D. Fifth American Edition, Thoroughly Revised. Large 12mo., pp. 744. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, cloth, $3.00 net; full leather, $3.50 net.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M., M.D. Vol. III.: Climatology;

Health Resorts; Mineral Springs. By F. Parkes Weber, M.A., M.D., F.R.C.P. (Lond.), with the Collaboration of Guy Hinsdale, A.M., M.D. In Two Books. Book I.: Principles of Climatology; Ocean Voyages; Mediterranean, European, and British Health Resorts. 8vo., pp. 336. Illustrated with Maps. Book II.: Health Resorts of Africa, Asia, Australasia, and America. Special Therapeutics. With a Special Article on the Hawaiian Islands by Dr. Titus Munson Coan of New York. 8vo., pp. 420. Illustrated with Maps. [Philadelphia: P. Blakiston's Son & Co. 1901. Price for the complete set of eleven volumes, cloth binding, $22.00.

Diseases of the Digestive Organs in Infancy and Childhood. With Chapters on the Diet and General Management of Children, and Massage in Pediatrics. By Louis Starr, M.D. Third Edition, Rewritten and Enlarged. 12mo., pp. 448. Illustrated. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $3.00 net.

The Diagnosis of Mental and Nervous Diseases. By Howell T. Pershing, M.Sc., M.D. 12mo., pp. 223. Illustrated. [Philadelphia: P. Blakiston's Son & Co. Price, $1.25 net.

The Microscope. An Introduction to Microscopic Methods and Histology. By Simon Henry Gage. Eighth Edition. Revised, Enlarged, and Illustrated by over Two Hundred Figures. 8vo., pp. 299. [Ithaca, New York: Comstock Publishing Co. 1901.

The Practice of Obstetrics, by American Authors. Edited by Charles Jewett, M.D. Second Edition. Revised and Enlarged. 8vo., pp. 786. Illustrated with 445 Engravings, 48 of which are in Colors, and 36 Colored Plates. New York and Philadelphia: Lea Brothers & Co. 1901. Price, cloth, $5.00 net; leather, $6.00 net; half morocco, $6.50 net.

Diseases of the Intestines. Their Special Pathology, Diagnosis, and Treatment. With Sections on Anatomy and Physiology, Microscopic and Chemic Examination of the Intestinal Contents, Secretions, Feces, and Urine; Intestinal Bacteria and Parasites; Surgery of the Intestines; Dietetics; Diseases of the Rectum, etc. By John C. Hemmeter, M.D., Philos.D. In Two Volumes. Vol. I. Large 8vo., pp. 742. Anatomy, Physiology, Intestinal Bacteria, Methods of Diagnosis, Therapy and Materia Medica of Intestinal Diseases, Diarrhea, Constipation, Enteralgia and Enterodynia, Meteorism, Dystryplasia, Enteritis, Colitis, Dysentery, Intestinal Ulcers, Intestinal Neoplasms, etc. With many Original Illustrations in Colors. [Philadelphia: P. Blakiston's Son & Co. 1901. Price, $5.00 per volume.

A Text-Book of Medicine. For Students and Practitioners. By Dr. Adolf Strümpell. Third American Edition. Translated, by permission, from the Thirteenth German Edition, by Herman

F. Vickery, A.B., M.D., and Philip Coombs Knapp, A.M., M.D. With Editorial Notes by Frederick C. Shattuck, A.M., M.D. 8vo., pp. 1242. With One Hundred and Eighty-five Illustrations in the Text and One Plate. [New York: D. Appleton & Co. 1901. Chicago: D. Appleton & Co., 203 Michigan Ave.

A Treatise on Surgery. By American Authors. For Students and Practitioners of Surgery and Medicine. Edited by Roswell Park, A.M., M.D. Third Edition, Enlarged and thoroughly Revised. Royal 8vo., pp. 1408. With 692 Engravings and 64 full-page plates in Colors and Monochrome. [New York and Philadelphia: Lea Brothers & Co. 1901. Price, cloth, $7.00 net; leather, $8.00 net.

The Physician's Pocket Account Book has been issued by the *Medical Council* of Philadelphia. The Account Book has been arranged by J. J. Taylor, M.D., and consists of a manila bound book of 208 pages in a leather case. It is a book which enables the physician to make an original entry directly a service is rendered, and it is so arranged as to stand the test of the law. It is a very practical book which will teach physicians who use it business methods, and also enable them to realize more upon their work. The price of the book complete is $1.00; subsequent books to fill the case are 40 cents each, or three for $1.00. One advantage of this book is that a physician's heirs are enabled, by its methods, to collect bills after his death—a most important thing in many instances. We can heartily commend it to those who have a credit practice.

Journal of the Association of Military Surgeons of the United States is a handsomely gotten up publication. The first number, which is before us, is an octavo of 224 pages, containing the proceedings of the tenth annual meeting of the Association, besides much other interesting matter. The *Journal* is to appear quarterly for the present at the subscription price of $5.00 a year. It is the only journal devoted to military medicine published in the English language. Dr. James Evelyn Pilcher is the editor, and he has produced a fine publication. The *Journal* is published at Carlisle, Pa., by the Association of Military Surgeons. We are much pleased with the publication, and hope to see it appear monthly at no distant date, as we are promised by the editor.

The American Journal of the Medical Sciences has issued a reprint of the special article devoted to the official report of the case of President William McKinley. This is an interesting document well worthy of preservation.

The Cataphoric Treatment of Cancer is the title of a reprint by Dr. G. Betton Massey. The author destroys the cancer by means of cataphoresis, so managed that the growth is at-

tacked by nascent salts of mercury, a method discovered by the author. It certainly opens up a large field for physicians, and if the claims advanced for the method be true, it is destined to supplant surgical measures.

Revista di Ortopedia e Terapia Fisica is an octavo bimonthly whose initial number bears the date September, 1901. It appears every other month at Naples, Italy, the subscription being lira 12 in Italy and lira 15 in foreign countries. Dr. Attilio Curtio is the editor, and in his first number, which is an octavo of 32 pages, we find some excellent illustrated articles. The necessity of a publication devoted to orthopedics is insisted upon by the editor, and very justly so. We are pleased with the first number of this publication and hope to see it successful.

A Handsome Group of Portraits.—About a year ago, within the short period of three weeks, four eminent and distinguished physicians departed this life. Two of these well-known men—Hunter McGuire and Lewis A. Sayre—were surgeons, and two—Jacob M. DaCosta and Alfred L. Stillé—physicians, and three of them were ex-presidents of the American Medical Association. Believing that the rank and file of the profession would appreciate and preserve portraits of these representative practitioners and teachers, the Arlington Chemical Company commissioned a competent artist to paint them in oil in the shape of a panel suitable for framing, and have reproduced the painting for distribution to their friends in the profession. This handsome and thoroughly worthy group of portraits is now being mailed, and if any physician is, perchance, omitted from the list, a request will bring a copy.

The Medical Critic is the latest arrival in the field of medical journalistic literature. The first number, which we have just received, contains 72 pages of reading matter. It is edited by Dr. M. W. Currans, who is assisted in his work by a corps of twenty-nine associate editors. As announced in its opening editorial, the aims of the *Medical Critic* are good. We quote: "Prepared by a staff of editors, each one having entire charge of the subject connected with their specialty, and aiming to provide the general practitioner and specialist with the current news, advances in science and reviews of all important articles published each month, thus enabling the reader to dispense with a number of special journals, which he must now obtain to secure information along particular lines, and, when in addition we add that we will present to each subscriber an annual or semi-annual 'Index Medicus' (decision on series to be decided by the subscribers), which will be a complete summary of all foreign and domestic literature, we think the reasons for our existence are sufficiently numerous to merit your cordial co-operation."

A commendable move also is the paying for all original ar-

ticles and furnishing 100 copies of the publication gratis to the author. The *Medical Critic* is published monthly at 154 East 72d Street, New York City, the subscription price being $1.00 a year, in advance.

The Physician's Visiting List (Lindsay and Blakiston's) for 1902 has come to us. Its popularity has never diminished, as evidenced by this issue, which makes it the fifty-first year of its publication. It is hardly necessary to refer to its contents, which consist of all those memoranda so useful to a practicing physician. It is well printed on thin but good paper, handsomely bound with tucks and gilt on edge. Messrs. P. Blakiston's Son & Co. of Philadelphia now publish it in several different styles. There are three editions—the Regular, the Perpetual, and the Monthly. The prices are listed as follows: Regular Edition, for 25 patients a day or week, $1.00; for 50, $1.25; for 50, two volumes, $2.00; for 75, two volumes, $2:00; for 100, two volumes, $2.25. The Perpetual Edition, for 1,300 names, interleaved, $1.25; for 2,600, $1.50. The Monthly Edition is 75 cents in plain binding and $1.00 in leather cover. All of these visiting lists are compact, complete, and convenient.

MELANGE.

Mrs. Eddy on Vaccination.—John Wilkes denied that he was a Wilkite; and it would appear that the high priestess of Christian Science might with equal truth deny that she is an Eddyite. As vaccination is now a burning—or should we say an itching?—question, the following delivery of Mother Eddy may be interesting:

On the subject of reporting contagion, I have this to say: I have always believed that Christian Scientists should be law-abiding, and actuated by this conviction I authorized the following statement, which appeared in the Boston *Hearld* about a year ago: "Rather than quarrel over vaccination, I recommended that, if the law demand an individual to submit to this process, he obey the law, and then appeal to the Gospel to save him from any bad results. Whatever changes belong to this century, or any epoch, we may safely submit to the providence of God, to common justice, to individual rights, and governmental usages.

This statement should be so interpreted as to apply, on the basis of Christian Science, to the reporting of contagion to the proper authorities when the law so requires. When Jesus was questioned about obeying the human law, he declared: 'Render unto Cæsar the things which are Cæsar's,' even while you 'render unto God the things which are God's.'"

This utterance shows that Mrs. Eddy has more sense than most of her disciples—which, however, is not saying much!—*Practitioner*.

Pelf and the Practice of Medicine.—To the Editor of the New York Times:—Semper avarus eget: certum voto pete fidem. (The miser is always in want: stake a certain limit to your wishes.) This motto should be put over the door of entrance to the medical profession. East or west, it is the same. The honest practice of medicine gives only a beggarly sustenance. Whatever we get over that is not worth the candle. Here is a letter from a Kansas lawyer:

"Dear Doctor: My son W. is practicing medicine at Fairbury, Neb., a town of about 5,000 inhabitants. He has, as I hear, the largest practice of any physician in town. He writes me that he gets no money. I think he made a mistake in settling in the arid region. The people there have raised nothing for two years, and cannot pay doctors. I believe they have a corn crop this year. He would like to get a letter from you. I have always thought you had something to do with his studying medicine."

And here is my reply:

"I am naturally glad to hear that W. has such a good practice. Of course, any physician worth his salt should be able to live on air for a long time. He is at any rate acquiring experience and self-reliance, and his day of material grandeur is sure to come. Yet none of my sons will become a doctor. Practice is as hard here as it is in Nebraska. There are not over 100 doctors in New York honestly making $10,000. The largest office practice here averaged but $67,000. There are probably not more than 2,000 making between $2,500 and $5,000. The majority of conscientious physicians are just able to meet expenses. Yet I think for a young man, with a few years' experience, a cosmopolitan city like New York offers, after all, a more promising

field, that is, if he has been tried long enough to be proof against professional temptations. He can lay up here, above all, what moths cannot destroy nor corruption rust. Happy is the man that findeth wisdom, and the man that getteth understanding. For the merchandise of it is better than the merchandise of silver and the gain thereof than fine gold."

ALBERT S. ASHMEAD, M.D.

New York, Oct. 10, 1901.

The Bacillus of Nelson.—United States Consul Victor E. Nelson, of Bergen, Norway, discovers the Leper Bacillus.—From the New Work *World* of October 28, 1901, we extract the following:

LEPROSY BACILLUS FOUND IN NORWAY.

DR. HANSEN, OF BERGEN, ITS DISCOVERER, NOW SEEKING THE GERM'S ANTAGONIST.

WASHINGTON, Oct. 27.—Consular advices received by the Marine Hospital Service state that the leprosy bacillus, which has defied the investigations of the medical scientists for years, has been found by Dr. Armauer Hansen, of Bergen, Norway.

Dr. Hansen is now at work trying to discover the antagonist of the bacillus. When that has been accomplished the problem which has defeated physicans for ages—a cure for the terrible malady—will be solved.

The work that Dr. Hansen has undertaken may not be completed for years, perhaps, not in his lifetime; but the finding of the bacillus itself is regarded as of the first importance, as it opens the way to the ultimate goal—the control and cure of the disease.

Eminent physicians in all countries of the world have devoted years to a study of leprosy only to be baffled by the strange disease. The discovery of Dr. Hansen is, in consequenee, expected to revive the interest of the scientific world in the subject.

The news came to the Marine Hospital service in a communication from United States Consul Victor E. Nelson, at Bergen. He says that the prevalency of leprosy in Denmark must be imputed to the grotesque carelessness of the people of that country. There are six leprosy patients there, four of whom are in Copenhagen.

In Denmark leprosy is not included in the few diseases which are subject to public treatment. Iceland, on the other hand, has its own leprosy law.

At the Lungaanaes Hospital in Iceland, established by the Odd Fellows' order, there were thirty-one patients received during 1899. Of these eighteen are now dead and two have been discharged as cured, though, Consul Nelson states, relapses are usual in leprosy cases.

The fearfully high death rate in the Iceland hospital is explained by the fact that 1899 was the first year of the hospital's work, and that the worst of Iceland's population were first admitted.

The Icelanders, the Consul reports, are very imprudent in dealing with the disease. The victims use the same bed and eating and drinking utensils as the healthy members of a family.

Greatest in the World—Prof. Schweitzer Profoundly Impressed With Parke, Davis & Co.'s Plant—Celebrated Expert Pays a Visit to Detroit.—Prof. H. Schweitzer, one of the foremost chemists in the country, secretary of the American branch of the Society of Chemical Industry of London, England, ex-professor of chemistry in the great Heidelberg University, and a member of the committee on adulterations of the National Wholesale Druggists' Association, is at the Russell House.

Prof. Schweitzer comes to Detroit for the purpose of giving expert testimony in the case against Detroit men charged with counterfeiting trademarks owned by Farbenfabriken, Bayer & Co. of Elberfeld, Germany. The professor is well known to the courts in the east, as he is almost invariably called as an expert in cases where the questions involved are similar to those that will come before the court in the Detroit case.

Herr Schweitzer is but 41 years old, yet he has reached the very pinnacle of success in his chosen profession. In appearance he is the typical dashing student of the German universities, ever ready to quaff a glass of Rhine wine or bock beer, and just as ready to fight a duel in the moonlight.

The professor has traveled all over the world perfecting himself in his profession, but not until he came to Detroit did he

realize the greatness of the Parke, Davis & Co. plant. He said he had heard of it in all quarters of the globe, and yet he did not expect to see such an enterprise in what he called the "middle west of a half-populated country."

Prof. Schweitzer visited the plant yesterday afternoon, and this is what he says he found:

"The greatest industry of the kind in the world, the greatest beyond all question. The biological department was astounding. The physical assay work on animals is worth to a student a walk of 1,000 miles. The scientific atmosphere is an inspiration, and the ingenious machinery a marvel. I was told that there were employed in the factory alone over 1,500 people, and that the firm has 207 traveling men employed.

"There are five American branches, I was told, and there are manufacturing plants in England and Canada. In the English plant are employed 250 persons. There is nothing wanting in this plant for the production of powerful, accurate, uniform and palatable medication. They have a circulating library for the employes, as well as an emergency hospital, and I understand the employes have decent hours and are well treated."

The professor was asked why such plants are not established in the old world. He said:

"The reason is that in the countries of Europe every druggist is a manufacturer. He compounds his own medicines in the back room of his store. He has his own laboratory, and there he experiments. Here it is different. If the druggists of the old world could have walked through the plant that I walked through to-day, they would no doubt have become discouraged, for they would realize that they could never hope to learn in a lifetime what is learned in that institution every hour."

Prof. Schweitzer will remain in Detroit until the cases before the courts are disposed of. In the meantime he will visit the University of Michigan. This is his first visit to this city, and he expresses himself as being charmed with the city and with its people.

Attorney Allan H. Frazer, who is a friend of the professor, will see to it that he comes in contact with the bright side of Detroit life.—*From the Detroit Journal, Tuesday, Oct. 22, 1901.*

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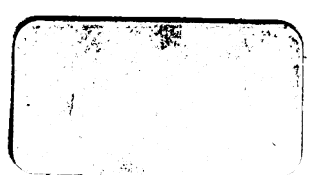

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